This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

Stanford University Libraries
3 6105 007 919 736

Digitized by Google

STANFORD·VNIVERSITY·LIBRARY

SCHOOL OF EDUCATION
LIBRARY

Digitized by Google

Digitized by Google

THE SCHOOL REVIEW

Digitized by Google

THE UNIVERSITY OF CHICAGO PRESS
CHICAGO, ILLINOIS

THE CAMBRIDGE UNIVERSITY PRESS
LONDON AND EDINBURGH

THE MARUZEN-KABUSHIKI-KAISHA
TOKYO, OSAKA, KYOTO, FUKUOKA, SENDAI

THE MISSION BOOK COMPANY
SHANGHAI

Digitized by Google

THE

SCHOOL REVIEW

A JOURNAL OF SECONDARY EDUCATION

Edited by
THE FACULTY OF THE SCHOOL OF EDUCATION OF THE UNIVERSITY OF CHICAGO

VOLUME XXV

JANUARY—DECEMBER, 1917

LIBRARY

THE UNIVERSITY OF CHICAGO PRESS
CHICAGO, ILLINOIS

Digitized by Google

Published
January, February, March, April, May, June, September,
October, November, December, 1917

247527
C
L

STANFORD LIBRARY

Composed and Printed By
The University of Chicago Press
Chicago, Illinois, U.S.A.

Digitized by Google

INDEX TO VOLUME XXV

AUTHORS

Allen, I. M.—Experiments in Supervised Study, 398–411.

Anderson, C. J., and Edsall, Winifred.—Observation and Practice in Courses for Training Rural Teachers, 16–25.

Angell, James Rowland.—Problems Peculiar to the Junior College, 385–97.

Ayres, Leonard P.—Military Drill in High Schools, 157–60.

Bailey, W. A.—The Administration of Quantitative and Qualitative Credit for High-School Work, 305–21.

Ball, Katharine F., and West, Miriam E.—Household-Arts Arithmetic, 722.

Bliss, D. C.—Military Training in the High School, 161–67.

Brownell, Baker.—A Criticism of Recent Attempts to Measure Language Ability, 495–503.

Camp, Frederick S.—Physical Education and Military Drill: What Should Be Our Policy? 537–45; Some "Marks": An Administrative Problem, 697.

Chapman, J. C.—*See* Randall *et al.*

Church, H. V.—An Experiment in Third-Year English, 488–94.

Clark, J. R., and Rugg, H. O.—A Cooperative Investigation in the Testing and Experimental Teaching of First-Year Algebra, 346–49; Standardized Tests and the Improvement of Teaching in First-Year Algebra, 113–32, 196–213; The Improvement of Ability in the Use of the Formal Operations of Algebra by Means of Formal Practice Exercises, 546–54.

Clark, Zelma E.—Socialized English, 581–94.

Clerk, Frederick E.—The Arlington Plan of Grouping Pupils According to Ability in the Arlington High School, Arlington, Massachusetts, 26–47.

Cole, Thomas R.—One Year of Supervised Study, 331–35.

Deutsch, Abraham.—A Phase of Compulsory Education, 73–87.

Downing, Elliot R.—Supervised Study and the Science Laboratory, 646–51.

Durborow, H. L.—Preparing While We Wait, 151–56.

Edsall, Winifred, and Anderson, C. J.—Observation and Practice in Courses for Training Rural Teachers, 16–25.

Giles, F. M.—Adolescent Moral Delinquency and the Attainment of Social Values, 433–43.

Gold, Hugo H.—Methods and Content of Courses in History in the High Schools of the United States, 88–100, 187–95, 274–82.

Hathaway, W. H.—A Course in Socialized High-School Physics, 731

Hobson, Elsie Garland.—Co-operation between Ancient History and English, 480–87.

James, Alice M.—Scientific Program-Making in the Central High School of Grand Rapids, Michigan, 504–11.

Johnson, Franklin W.—The Professional Reading of the High-School Principal, 233–42.

Johnson, Roy Ivan.—The Persistency of Error in English Composition, 555–80.

Koos, Leonard V.—Teacher-Training Departments in North Central High Schools, 249–56.

Lange, Alexis F.—The Junior College as an Integral Part of the Public-School System, 465–79.

McCartney, L.—The Junior High School, 652–58.

Masters, J. G.—High-School Fraternities, 422–32.

Monilaw, William J.—The Effects of Training Down in Weight on the Growing Boy and How to Control or Abolish the Practice, 350–60.

Opdycke, John B.—Literature *à la Carte*, 101–12.

Rugg, H. O.—How to Keep in Touch with the Quantitative Literature of Education, 753.

Rugg, H. O., and Clark, J. R.—A Cooperative Investigation in the Testing and Experimental Teaching of First-Year Algebra, 346–49; Standardized Tests and the Improvement of Teaching in First-Year Algebra, 113–32, 196–213; The Improvement of Ability in the Use of the Formal Operations of Algebra by Means of Formal Practice Exercises, 546–54.

Digitized by Google

Smith, Bertha M.—Efficiency in Assimilating Reading, 637–45.
Snedden, David.—The High School of Tomorrow, 1–15.
Starch, Daniel.—Further Experimental Data on the Value of Studying Foreign Languages, 243–48.
Steever, E. Z.—The Wyoming Plan of Military Training for the Schools, 145–50.
Stetson, Paul Clifford.—A Statistical Study of the Scholastic Records of 404 Junior and Non-Junior High-School Students, 617–36.
Stoutemyer, J. Howard.—The Educational Qualifications and Tenure of the Teaching Population, 257–73, 336–45.
Sutton, C. W.—*See* Randall *et al.*
Thurstone, L. L.—A statistical Method for the Treatment of School-Survey Data, 322–30.
Traner, Fred W.—Socializing the Study of History, 714.
Weld, Le Roy D.—A Standard of Interpretation of Numerical Grades, 412–21.
West, Miriam, and Ball, Katharine F.—Household-Arts Arithmetic, 722.
Wilds, Elmer Harrison.—The Supervision of Extra-Curricular Activities, 659–73.

ARTICLES

Adolescent Moral Delinquency and the Attainment of Social Values, F. M. Giles, 433–43.
Algebra, A Co-operative Investigation in the Testing and Experimental Teaching of First-Year, H. O. Rugg and J. R. Clark, 346–49.
Algebra, Standardized Tests and the Improvement of Teaching in First-Year, H. O. Rugg and J. R. Clark, 113–32, 196–213.
Algebra, The Improvement of Ability in the Use of the Formal Operations of, by Means of Formal Practice Exercises, H. O. Rugg and J. R. Clark, 546–54.
Ancient History and English, Co-operation between, Elsie Garland Hobson, 480–87.
Civics, A Course in Socialized, W. H. Hathaway, 731.
Compulsory Education, A Phase of, Abraham Deutsch, 73–87.
Credit for High-School Work, The Administration of Quantitative and Qualitative, W. A. Bailey, 305–21.
English, An Experiment in Third-Year, H. V. Church, 488–94.
English Composition, The Persistency of Error in, Roy Ivan Johnson, 555–80.
English, Socialized, Zelma E. Clark, 581–94.
Extra-Curricular Activities, The Supervision of, Elmer Harrison Wilds, 659–73.
Foreign Languages, Further Experimental Data on the Value of Studying, Daniel Starch, 243–48.
High-School Fraternities, J. G. Masters, 422–32.
History, Methods and Content of Courses in, in the High Schools of the United States, Hugo H. Gold, 88–100, 187–95, 274–82.
History, Socializing the Study of, Fred W. Traner, 714.
Household-Arts Arithmetic, Katharine F. Ball and Miriam E. West, 722.
Junior College as an Integral Part of the Public-School System, The, Alexis F. Lange, 465–79.
Junior College, Problems Peculiar to the, James Rowland Angell, 385–97.
Junior High School, The, L. McCartney, 652–58.
Language Ability, A Criticism of Recent Attempts to Measure, Baker Brownell, 495–503.
Literature *à la carte*, John B. Opdycke, 101–12.
Literature, Quantitative, How to Keep in Touch with, H. O. Rugg, 753.
Marks:" Some, An Administrative Problem, Frederick S. Camp, 697.
Military Drill and Physical Education: What Should Be Our Policy? Frederick S. Camp, 537–45.
Military Drill in High Schools, Leonard P. Ayres, 157–60.
Military Education, Massachusetts Commission on, 168–76.
Military Systems, Brief Summaries of Principal, by the Massachusetts Commission on Military Training, 177–86.
Military Training for the Schools, The Wyoming Plan of, E. Z. Steever, 145–50.
Military Training in the High School, D. C. Bliss, 161–67.

Digitized by Google

Numerical Grades, A Standard of Interpretation of, LeRoy D. Weld, 412–21.
Physical Education and Military Drill: What Should Be Our Policy? Frederick S. Camp, 537–45.
Plan of Grouping Pupils According to Ability, The Arlington, in the Arlington High School, Arlington, Massachusetts, Frederick E. Clerk, 26–47.
Preparing while We Wait, H. L. Durborow, 151–56.
Professional Reading of the High-School Principal, The, Franklin W. Johnson, 233–42.
Program-Making in the Central High School of Grand Rapids, Michigan, Scientific, Alice M. James, 504–11.
Reading, Efficiency in Assimilating, Bertha M. Smith, 637–45.
Rural Teachers, Observation and Practice in Courses for Training, C. J. Anderson and Winifred Edsall, 16–25.
Scholastic Records of 404 Junior and Non-Junior High-School Students, A Statistical Study of the, Paul Clifford Stetson, 617–36.
School of Tomorrow, The High, David Snedden, 1–15.
School-Survey Data, A Statistical Method for the Treatment of, L. L. Thurstone, 322–30.
Supervised Study and the Science Laboratory, Elliot R. Downing, 646–51.
Supervised Study, Experiments in, I. M. Allen, 398–411.
Supervised Study, One Year of, Thomas R. Cole, 331–35.
Teacher-Training Departments in North Central High Schools, Leonard V. Koos, 249–56.
Teaching Population, The Educational Qualifications and Tenure of the, J. Howard Stoutemyer, 257–73, 336–45.
Training Down in Weight on the Growing Boy, The Effects of, and How to Control or Abolish the Practice, William J. Monilaw, 350–60.

EDUCATIONAL NEWS AND EDITORIAL COMMENT

48–60, 133–39, 214–22, 283–92, 361–69, 444–52, 512–19, 595–605, 674–83.

CURRENT EDUCATIONAL WRITINGS

General Science, Review of Current Literature on, 453–60.
History and the Teaching of History in Junior and Senior High Schools, A Brief Review of the Current Literature Relating to, R. M. Tryon, 684–89.
Mathematics, A Critical Review of Three New Textbooks, 762.
Secondary-School Administration, Recent Publications in the Field of, Franklin W. Johnson, 370–76.
Secondary-School English, Review of Recent Books in, Ellen F. Geyer and R. L. Lyman, 606–11.
Secondary-School Mathematics, Review of Recent Literature on, E. R. Breslich, 520–26.

BOOK REVIEWS

Abernethy, Julian, English Literature, 67.
Angus, Francis R., Fundamentals of French: A Combination of the Direct and Grammar Methods (Arthur G. Bovée), 227–28.
Ashley, R. L., The New Civics: A Textbook for Secondary Schools, 532–33.
Ayer, Fred Carleton, The Psychology of Drawing, with Special Reference to Laboratory Teaching (Earl R. Glenn), 64–66.
Bowman, James Cloyd, The Promise of American Life, 68–69.
Brenhe, W. C., and Long, Edith, Plane Geometry (Abigail L. McRaith), 228–29.
Clark, J. Scott, *et al.*, A Study of English and American Writers (George Sherburn), 63–64.
Davis, C. O., Public Secondary Education, 462.
Davis, K. C., Productive Plant Husbandry—A Textbook for High Schools, 612.
Freeman, Frank N., Experimental Education, Laboratory Manual, and Typical Results (E. H. Cameron), 69–70.
Freeman, W. H., Applied Latin (W. H. Freeman), 376–79.
Freeman, W. H., Applied Latin: A Course for Beginners (W. L. Carr), 224–27.

Digitized by Google

Gehrs, J. H., Productive Agriculture, 532.
Hinchman, Walter Swain, The American School. A Study of Secondary Education (Imogene K. Giles), 142.
Kirkpatrick, M. G., The Rural School from Within (George L. Roberts), 529.
Kitson, Harry D., How To Use Your Mind: A Psychology of Study (J. R. K.), 140.
Kittredge, Mabel Hyde, The Home and Its Management (A. R. Hanna), 613–14.
Koos, L. V., The Administration of Secondary-School Units, 531.
Krause, Carl A., The Direct Method in Modern Languages (William F. Luebke), 61–62.
Lewis, Erwin E., Standards for Measuring Junior High Schools (Fred C. Ayer), 300.
Long, Edith, and Brenhe, W. C., Plane Geometry (Abigail L. McRaith), 228–29.
Miller, Elizabeth E., and Sargent, Walter, How Children Learn to Draw (Frank N. Freeman), 66–67.
Monroe, W. S., De Voss, J. C., and Kelly, F. J., Educational Tests and Measurements, 691–92.
Pearson, F. B., The Vitalized School, 461–62.
Powell, Sophy H., The Children's Library, 533.
Reigart, Lancasterian System of Instructions in Schools of New York, 768.
Richardson, Robert P., and Landis, Edward H., Fundamental Conceptions of Modern Mathematics. Variables and Quantities with a Discussion of the General Functional Relation, 529–31.
Rowe, Henry K., Society, Its Origin and Development, 462–63.
Rugg, H. O., Illustrative Problems in Educational Statistics, 693.
Rugg, H. O., Statistical Methods Applied to Education, 693.
Rugg, H. O., The Experimental Determination of Mental Discipline in School Studies (J. Herbert Kelley), 299–300.
Sandeson, E. D., and Peairs, L. M., School Entomology—An Elementary Textbook of Entomology for Secondary Schools and Agricultural Short Courses, 611–12.
Sargent, Walter, and Miller, Elizabeth E., How Children Learn to Draw (Frank N. Freeman), 66–67.
Scott, J. F., Patriots in the Making, 528.
Sellars, Roy Wood, Critical Realism, A Study of the Nature and Conditions of Knowledge (Frank Chapman Sharp), 379–81.
Seybolt, Apprenticeship and Apprenticeship Education, 768.
Starch, Daniel, Educational Measurements (E. E. Lewis), 62–63.
Tatlock, Jessie M., Greek and Roman Mythology (Adaline Lincoln), 301.
Thwing, C. F., Education According to Some Modern Masters, 613.
Towers, W. K., Masters of Space, 612–13.
Trafton, Gilbert H., Bird Friends: A Complete Bird Book for Americans (Ethel Golden), 67–68.
Tryon, R. M., Current Literature on Civics and Other Social Studies in Junior and Senior High Schools, 293–99.
Tryon, R. M., Household Manufactures in the United States, 1640–1860 (Robert E. Jordan), 526–27.
Twiss, G. R., Principles of Science Teaching, 690–91.
Walters, Francis M., The Principles of Health Control (L. Lenore Conover), 141.
Weir, Marion Clyde, The *Prometheus Bound* of Aeschylus (C. H. Weller), 223–24.
Wellman, Mabel T., Food Study (A. R. Hanna), 614–15.
Wellman, Mabel Thacher, Food Study: A Textbook in Home Economics for High Schools (Catherine Creamer), 300–301.
Welton, James, Principles and Methods of Teaching, 229.
Wilkinson, W. A., Rural School Management (W. L. Richardson), 460–61.
Wood, Clarence A., School and College Credit for Outside Bible Study, 527–28.
Woody, Clifford, Measurements of Some Achievements in Arithmetic (Fred C. Ayer), 381–82.

BOOK-NOTES

71–72, 143–44, 230–32, 302–4,

PUBLICATIONS RECEIVED

382–84, 463–64, 533–36, 615–16, 693–96.

Digitized by Google

STANFORD LIBRARY

THE SCHOOL REVIEW

A JOURNAL OF SECONDARY EDUCATION

VOLUME XXV JANUARY 1917 NUMBER 1

THE HIGH SCHOOL OF TOMORROW[1]

DAVID SNEDDEN
Columbia University, New York

1. The American high school is a young giant, now passing rapidly through his years of early adolescence. What will he be like, say in the year 1925, when, one may expect, he shall have attained his majority? In what essential respects will he differ from the youth of today who has not yet found himself, in spite of his great physical size, who is still closely tied to his mother's apron strings (for in a way, the college has mothered him), and who, notwithstanding his occasional freakishness, is still bound largely by the customs and superstitions of the youth reared in the atmosphere of mediaevalism?

2. In forecasting possible developments of secondary schools, let us keep in mind chiefly the urban or suburban community. The country high school like its prototype, the country elementary school, is unavoidably for the present, the Cinderella of the secondary-school sisterhood. We all hope that the prince bearing gifts will sometime find the rural high school, but for the present we cannot even be certain that he is on the quest. During the next decade it is clearly in those communities where many people live not too far from each other that we may expect experimental

[1] Notes of an address delivered by Professor David Snedden of Teachers College, Columbia University, New York, to the Central Association of Science and Mathematics Teachers, Chicago, December 1, 1916.

Digitized by Google

changes in secondary education to be launched, and permanent modifications to become established. At the risk of seeming unjustifiably dogmatic, let us hazard guesses as to what some of these will be.

3. The high school of today (as we personify it) thinks of its responsibilities chiefly in connection with the best fourth or best third of the children of the community who have completed the eight-year elementary-school course and who are usually from fourteen to eighteen years of age. But, beginning with the segregation of children from twelve to fourteen years of age into the junior high school, we shall probably bring within the general scope of secondary education all schooling suited to youths from twelve to eighteen years of age, whether general or special, liberal or vocational. There is, in reality, little to distinguish secondary from elementary education in purpose or kind—the differences are chiefly in degree only. Most of the distinctions between elementary and secondary education which we try to incorporate into educational theory are factitious and unhelpful. In the secondary school of 1925 we shall doubtless be teaching some children of even fourteen or fifteen years of age the rudiments of reading and writing and number, but, because of their age, we shall minister to their educational needs in special classes in some type of secondary-school class, instead of placing them in lower schools with younger children.

4. The high school of today thinks of its *certainly attainable* purposes chiefly in terms of the mastery of certain forms of highly organized knowledge, and in strict accordance with certain traditional standards as to what constitutes such mastery—capacity for verbal reproduction, performance of definite exercises, etc. It also dreams freely of other purposes not so proximate, and of greater permanent significance—the training of mind, the ennobling of character, the in-breathing or evoking of persistent cultural interests, the kindling of the civic sense and the like. But in large part these dreams now give us only castles in Spain. Like the enterprises of poor Colonel Sellers, the big aspirations which we cherish on behalf of our secondary schools sound well by the fireside or as the subject-matter of after-dinner speeches; but in the cold light of

Digitized by Google

day they guide us very little in the actual tasks planned or under way in the teaching of Latin, German, English, physics, ancient history, algebra, mechanical drawing, lathe-work, or commercial geography.

5. By 1925, it can confidently be hoped, the minds which direct education will have detached from the entanglements of our contemporary civilization a thousand definite educational objectives, the realization of which will have demonstrable worth to society. It will be found that many of these can best be realized through the medium of some type of secondary school or class therein. In defining and giving comparative valuations to these objectives or purposes or goals we shall, of course, take account in due measure of the possible and the desired well-being of the individual as well as of the society of which he is a member; of the native powers, interests, and probable future opportunities of the learner; and of the by-education resulting from, or to be procured through, such social non-school agencies as the home, the church, the workshop, community contact, and the like.

6. Educational objectives worthy of a place in publicly supported secondary schools will have been found to be of many kinds. Some of these will center chiefly in the promotion of physical well-being—to be realized through the establishment of right ideals of health, strength, and endurance; the imparting of needed instruction in hygiene and sanitation; and the training in habits of posture, activity, and restraint. We get glimpses of the possibilities in this direction even now, but they are only glimpses. What is the significance to the educational programs of the future of the results on physique and health of the forced training and the exposure endured by the millions of recruits in the present war? How far are we yet from a realization of the cost to the physical womanhood of this country of our specialized nerve and brain drill in schools?

7. Again, some of our objectives will center definitely in cultivation of specific personal intellectual and aesthetic interests—the resources wherewith we enrich our leisure time, our individual lives. In view of their ostensible aims, the high schools of the present should be doing more along this line than is now actually the case.

Digitized by Google

They should at least establish abiding cultural interest—appreciations, tastes, enthusiasms, even hobbies—in literature, science, foreign languages, and history. Surely the high school of 1925 will be doing this? Surely it will take the necessary means to insure that all those who have felt its influence will somewhere in the world's multifarious cultural possibilities find *leads* which may grow into vital personal interests of a high order, give rise to avocational activities, and entitle the possessor to rank with cultivated men in some field. In music, literature, social science, natural science, history, travel in foreign lands, the practical arts suited to the amateur handicraftsman, politics, drama, the moving picture—in most, if not all, of these directions we may expect the school to offer openings to be made available to each learner according to his leanings, his capacity, and his possibilities of largest self-development.

8. A third class of objectives will be evolved in connection with the direct and purposive development of young people toward the standards of civic habit, knowledge, ideal, and the resulting behavior which befits the member of the social group, the citizen of the state in the twentieth century. Call this form of education moral, civic, ethical, humane, religious, social—in greater or less degree, it is each and all of these—it is certain that in the complicated social life of the age upon which we have already entered we must have it in ever greater measure if we are to survive. It must include the formation of certain fine social habits and attitudes which the by-education of agencies other than the school has not given; it must include the giving of much of the social knowledge which is necessary to guide us aright in the jungle of modern social life; and it must be strong in the cultivation of a variety of right sentiments and ideals. But it must do much more than train (in the specific sense), inform, and inspire; it must provide for action, for achievement, for social control, for government, for social work, within the reasonable capacities of the adolescent learner. The activities of the Boy Scouts, of youthful camping parties, of voluntary organizations and self-governing groups in schools now suggest some of the possibilities in this direction. But we shall have to multiply new openings. Here must begin the service activities

Digitized by Google

for political participation, for defense, for business co-operation, for accumulation and use of capital, for the reform of anti-social individuals, for the co-operative support of the handicapped, and for the pioneering of new constructive effort. We can take for granted the disposition of all adolescents to become good and approved and progressive members of society, but we must kindle to the utmost the motives and vitalize the sanctions that, for these younger people, give depth and reality to their social education. We shall find it practicable and desirable to make more of appeal to the spirit of fair play, to the sense of personal loyalty, to the jealousy of personal honor, to the desire for success, to the altruistic, and to the religious sentiments than we have been doing heretofore, and we shall learn how to do it in each case without provoking self-consciousness and opposition, or permitting indifference and "slacking." The high school of 1925 will have learned how to give "backbone" to moral and social education, as, in some degree, the Y.M.C.A., the boys' clubs, the Boy Scout leaders, and the conductors of camps have already done. But it will find also that many of the best results of social education are to be developed, not in the shape of specific habits, definite knowledge, and vigorous activities, but rather as kindled appreciations, refined sentiments, and uplifted ideals. For all this, pedagogical methods have yet largely to be devised.

9. Finally, we must expect that opportunities for vocational education in endless variety will evolve under, or in connection with, the secondary schools of 1925. Until the economic and domestic basis of our present civilization changes radically it will be inevitable that the majority of our boys and girls will desire and will be obliged by circumstances to enter upon self-supporting work somewhere between the ages of fifteen and eighteen. For many of these it will be found that specific vocational schools designed to give, or, at any rate, to supervise their initial vocational education will be of the utmost importance. Some stages of habituation and of experience looking to direction (foremanship) may well be left to the by-education of shop, office, and farm. The exact relation of the vocational school to the school of general or liberal education cannot now be foreseen, but in all probability it will somewhat

Digitized by Google

resemble the relation of the college of vocational education to the liberal arts college in the American university. Certainly these vocational schools, whether making "full-time" offerings (that is, undertaking all three phases of vocational education—practical participation, related technical study, and general studies related to the vocation) or only "part-time" offerings (evening schools, continuation schools, etc., supplementing the learning acquired in the commercial pursuit of a vocation), will be closely linked up with the occupational fields for which preparation or further training is being given. If these occupations are found in productive industries occupying partially segregated districts, then, doubtless, the full-time vocational schools will also be located in these districts.

Probably *vocational* education and *general* education (including under the latter *physical*, *social*, and *cultural*) will not be blended or fused in the efficient secondary schools of 1925, as seems to be the case now in certain quasi-vocational schools ostensibly making offerings of vocational instruction or training as elements in a modified scheme of general education (actually they give only "denatured" vocational education). All signs point to the conclusion that in 1925 the person learning a vocation in a school will organize his time and expend his energy much as does now the approved employee in home, shop, or office, or on the farm, on the road, or on shipboard—he will give from seven to ten hours of "the heart of the day" to his vocational pursuit (practice and learning) and his remaining waking hours (and holidays) to recreation, the furthering of personal culture, and the discharge of his civic and other social responsibilities.

10. In addition to definition of purposes the high school of 1925 will surely have made great advances over present practice as regards the definition of effective methods of instruction and training. For this purpose it will be essential to distinguish *kinds* and *qualities* of useful learning and to apply the distinctions thus made to the varied departments of human activity which we wish to improve or otherwise modify through our schooling.

For example, is it not desirable that pupil and teacher should know quite definitely and be in agreement as to when learning should result in well-assimilated knowledge, capable of instant

Digitized by Google

application in the course of life's practical activities? Without doubt secondary education today lacks a certain vertebral quality, a kind of hardness and firmness. Its results are vague, its graduates intellectually flabby to a degree that disturbs us. But, certainly, the way out of this difficulty is not that of simply making *all* studies hard, of setting more rigorous examinations, of "firing" weaker pupils, or of appealing to the sense of fear and the methods of "driving" generally.

As in all other fields of activity where high standards prevail, education must learn to discriminate the quality of the means which it employs to attain ends. We need "vertebrate" quality in secondary education, but we need much besides. Liberal education can better be defined in terms of appreciation, interest, or capacity for wise choice than in terms of power to execute, or to apply knowledge definitely. What are the pedagogic means of producing appreciation, taste, or interest over wide areas? We have much to learn here.

11. The high school of 1925 will probably be much more effective than is the high school of 1916 in training the mental powers of its pupils. For one thing, it will doubtless teach the pupils themselves something of mental science—at least to the extent of enabling them to appreciate the importance of keeping the complicated machinery of the nervous system in good running order, and the large possibilities of so training the powers of the mind that optimum efficiency shall be the outcome.

Quite certainly, however, the high school of 1925 will not be, as is the high school of the present, the victim of the quackeries, the cure-alls, the "luck stones," that came into vogue in the ages of educational faith. In the dark ages of medicine it was widely taught and believed that some nauseous drugs, some awful concoctions of dead or diseased organic matter, were the indispensable cures for human ailments. In somewhat the same way the modern educational exemplars of the mediaeval healer insist that some nauseous and unnatural studies, largely made up of dead matter, must be employed for the educational salvation of the young.

For all practical purposes the future high school will insist upon the fullest mental training as a necessary feature and expected

Digitized by Google

by-product in connection with the pursuit of objectives otherwise worth while also. Conceivably, provision will be made for mental gymnastics, for "corrective" work, for very specific training on occasions when the need of that shall be apparent. But this will be something so different from our present unintelligent reliance upon algebra and Latin as chosen panaceas for the undisciplined mind that any comparison would be out of the question.

12. Will anything like uniform programs of instruction and training for large number of pupils be found in the high schools of the future except in the case of particular groups of studies and forms of practice designed to produce vocational efficiency in a given field? It is doubtful. The field of human culture is so large, its valuable prospects so many, that each learner, under wise guidance, will usually make his individual program, subject, of course, as in the modern university, to the administrative limitations of the institution to make many and varied offerings.

Hence, we may be certain that the large, rich, secondary schools of 1925, holding forth opportunities suited to all children from twelve to eighteen years of age, will offer a wide range of activities, some of the "hard-work" order, some of the "high-grade play" order, and that no pupil will be debarred from making his own program except for weighty reasons, the burden of establishing the validity of which will rest upon the school. But it will be assumed that the guardians of the pupils, as well as the pupils themselves, are disposed to do the things educationally that will prove most profitable to them, and that advisory agencies will be found in the school to indicate what lines of study, of personal training, and of culture will prove most worth while. We may hope that the doctrine of the innate depravity of secondary-school students, as well as the doctrine of the incorrigible imbecility of their parents, will have been rendered innocuous, if not obsolete.

13. A special word is due as to the probable place of science and mathematics in the high schools of 1925.

First, while absolute prescriptions will be rare, it will generally be expected that all students will give some time to reading, amateur experimentation, and field study, in a sufficient variety of fields of science to beget in them wide and generous appreciation

Digitized by Google

of the part played by science in modern life. All the work offered with this end in view will be of the "*beta*" type. It is to be hoped that students of educational psychology will have discovered satisfactory *means* (organized materials, reading-matter, opportunities for experimental work) and *methods* to make learning of this kind count toward *liberal* education when given under school auspices. At present many of our pupils are left to the chances of general reading, the moving pictures, and personal associations to obtain an appreciative contact with the inspiring aspects of modern scientific achievement.

For the present we should devote our best efforts to the organization of a course—very flexible and very alluring—in general science for youths from twelve to fifteen years of age. One hopes that a similar course in mathematics could be evolved, but, with the traditions of that subject crystallized as they now are, the situation seems hopeless. Certainly, from the point of view of any sound theory of *liberal* education the thing is possible and most highly desirable.

Some branches of science and of mathematics offered as "*alpha*" units will, in the future high school, be designed primarily to serve as prevocational studies; that is, students anticipating entry upon certain mathematics- or science-using vocations will deliberately seek, as preliminary thereto, equipment in the shape of ability to use these subjects as instruments. Probably adherence to this primary aim will result in great modifications of these subjects from the pedagogic forms in which they now appear, and tribute must be paid to the large amounts of experimental and genuinely constructive work done in this direction by school men in and around Chicago.

Then, of course, some mathematics and some science, always in highly specialized and very directly "applied" forms, will appear in the various vocational schools clustering under the secondary-school organization of the future.

14. Below is given a long list of the "subjects" divided into alpha ("hard work") and beta ("amateur," "high-grade play") classes, which will possibly be considered by the school authorities of 1925 in determining the offerings which it is feasible for a

Digitized by Google

A LIST OF POSSIBLE SECONDARY-SCHOOL SUBJECTS FOR A "MODERN" HIGH SCHOOL

	Name of Subject*	Alpha Units	Beta Units
I.	1. *English language:*		
	2. English grammar	1	.....
	3. English written composition	1 or 2	.....
	4. Silent reading	½ or 1	.....
	5. Voice culture	1	.....
	6. Oral reading	1	.....
	7. Public speaking	1	.....
	8. Rhetoric	1	.....
	9. General study of English	1	.....
	10. History of English language	.....	1
	11. Current usage	.....	1
II.	12. *English literature:*		
	13. American selections	.....	1
	14. Nineteenth-century English selections	.....	1
	15. Classical English selections	.....	1
	16. Contemporary fiction	.....	1
	17. Contemporary drama and poetry	.....	1
	18. Contemporary general literature	.....	1
	19. Historical review of English literature	.....	1
	20. Intensive study of selections	1	.....
III.	21. *Natural science:*		
	22. General science	.....	1
	23. Astronomy	.....	½
	24. Geography	.....	1
	25. Geology	.....	1
	26. Biology and evolution	.....	1
	27. Natural history of man	.....	1
	28. Physics	1	.....
	29. Chemistry	1	.....
	30. Biology	1	.....
IV.	31. *Social science:*		
	32. Community civics	½ or 1	½ or 1
	33. Study of nations, historical and contemporary	.....	1
	34. Essentials of social science, with materials for historical perspective	1	1
	35. History, American	1 or 2	1 or 2
	36. History, general	1 or 2	1 or 2
	37. School government, practice	.....	½
	38. Electoral government, national, state and local, including voting	½	½
	39. Social ethics	.....	1
V.	40. *Mental science:*		
	41. General mental science	.....	1
	42. Methods of study	½	.....
VI.	43. *Mathematics:*		
	44. General mathematics	.....	1
	45. Algebra	1	.....
	46. Plain geometry	1	.....
	47. Trigonometry and solid geometry	1	.....
	48. Prevocational arithmetic	1	.....

*Figures at left refer to explanatory notes at end of section.

Digitized by Google

A LIST OF POSSIBLE SECONDARY-SCHOOL SUBJECTS FOR A "MODERN" HIGH SCHOOL—*Continued*

	Name of Subject*	Alpha Units	Beta Units
VII.	49. *Classical language and literature:*		
	50. Classical language and literature, general		1
	51. Latin in relation to English	½	
	52. Latin language	2	
	53. Greek language	2	
VIII.	54. *Modern language:*		
	55. German reading	1 or 2	
	56. French reading	1 or 2	
	57. Spanish reading	1 or 2	
	58. Russian reading	1 or 2	
	59. Spoken German	1 or 2	
	60. Spoken French	1 or 2	
	61. Spoken Spanish	1 or 2	
	62. Prevocational Spanish reading	1	
	63. German literature		1
	64. French literature		1
IX.	65. *Graphic and plastic art:*		
	66. Drawing and Painting, amateur		1 or 2
	67. Mechanical drawing	1 or 2	
	68. Illustration, amateur		1 or 2
	69. Design, 2d and 3d dimension, amateur		1 or 2
	70. Design, prevocational	1	
	71. Art appreciation, historical and contemporary		1 or 2
X.	72. *Music:*		
	73. Chorus singing	1	
	74. Individual vocal	1	
	75. Individual instrumental	1	
	76. Band	1	
	77. Musical appreciation (including historical)		1 or 2
XI.	78. *Physical education:*		
	79. General hygiene and sanitation		1 or 2
	80. Play, games, field sports		1 or 2
	81. Individual corrective exercise	1	
	82. Rifle team and hiking	1	
XII.	83. *Vocational guidance:*		
	84. General reading-course		1
	85. Tests for vocations	1	
XIII.	86. *Practical arts:*		
	87. Agricultural arts		1 or 2
	88. Industrial arts		1 or 2
	89. Commercial arts		1 or 2
	90. Household arts		1 or 2
XIV.	91. *Vocational training:*		
	92. Machine metal work, practice (school, commercial, shop)	4 or 8	
	93. Machine metal work, technical	2 or 4	
	94. Machine metal work, informational		1 or 2
	95. Machine metal work, part time in private shop	4 or 8	
	96. Machine metal work, technical (school)	½ or 4	
	97. Machine metal work, general	1 or 2	
	98. Gardening, home farm practice	4 or 8	

Digitized by Google

A LIST OF POSSIBLE SECONDARY-SCHOOL SUBJECTS FOR A "MODERN" HIGH SCHOOL—*Continued*

Name of Subject*	Alpha Units	Beta Units
99. Gardening, technical (school)	2 or 4	
100. Gardening, informational (school)	.....	1 or 2
101. Counter salesmanship (private shop practice)	4 or 8	
102. Salesmanship, technical (school)	2 or 4	.....
103. Salesmanship, informational (school)	.....	1 or 2
104. Homemaking, practice (private home)	4 or 8	.....
105. Homemaking, technical (school)	2 or 4	.....
106. Homemaking, informational	.....	1 or 2

*Figures at left refer to explanatory notes at end of section.

NOTE.—Repeat for other vocations, such as: house carpentry, printer, painter, fireman, teamster, electrical worker, weaver, shoemaking specialist, etc.; farmer, stock raiser, farmhand, florist, horticulturist, etc.; stenographer, bookkeeper, field salesman, clerk, file clerk, etc.; wage-earning domestic, "mothers' helper," children's nurse, waitress, etc.

particular school to make. It would be easy to add to or otherwise modify this list according to one's preconception as to things "educationally most worth while." Until we possess a more adequate educational psychology, and especially sociology, we shall, of course, have few satisfactory criteria as to the "worth whileness" of these or any other proposed members of secondary-school curricula.

The measures indicated by the figures in the columns on the right ("Carnegie units") have little validity, of course, and are included merely to suggest the desirability of eventually evaluating all these studies somehow in terms of the amount of time and—it is to be hoped—effort which should properly be given them.

EXPLANATORY NOTES

1. *English language* is the term here used to cover all forms of oral and written expression and of apprehension on a technical basis, such as silent reading.

2. A technical study, especially of the principles of fundamentally good writing and reading—probably different aspects of the same subject. It may be assumed that the correction of solecisms of speech will be made independently of this study.

3. The subject as ordinarily understood.

4. A subject not now developed, but which offers much promise and is capable of having developed a technique of its own.

5. Results to function especially in speech and oral composition.

Digitized by Google

6. A specialty for those desiring effectiveness in this department, either for socially decorative or for practical purposes, e.g., prospective teachers.

7. To cover a wide range—speaking to several persons simultaneously or addressing large audiences.

8. Like grammar, a formal study of principles for the sake of good writing and reading.

9. A systematic general study of elements that enter into the effective use of English. Intended as an alternative for those not electing two or more of the subjects already named.

10. Purely an appreciative study, based upon lectures and the reading of choice works.

11. An appreciative study based chiefly upon good usage of English by contemporary writers and speakers, bringing out especially their distinguishing qualities.

12. To cover all phases of literature in the vernacular. The actual objectives of this study are not yet clearly defined, but our faith in its possibilities is strong. As a matter of fact we shall ultimately classify the objectives of the study of English literature under three heads: (*a*) informational and historical, (*b*) for purposes of aesthetic appreciation, and (*c*) for purposes of socialization and character building.

13–19. Appreciative studies in the fields indicated, all elective, with, perhaps, requirement that not less than two shall be taken by every student. Few selections should be prescribed for all pupils alike. Much individuality should be allowed, and teaching is to be largely by way of conferences following readings by pupils.

20. Intensive study of one or more selections to obtain mastery of method of analytical study of English literature.

21. Objects of natural science teaching should probably be threefold: (*a*) appreciative insight into phenomena of environment, (*b*) mastery of distinct fields for prevocational purposes and interest in sympathetic study, and (*c*) scientific method which should be a by-product of all the teaching, it being remembered that scientific method has its appreciative as well as its executive aspects.

22–27. Appreciative studies based upon amateur motives of research and doing, and utilizing general reading, lectures, etc.

28–30. Systematic studies intended to be prevocational for some and to satisfy the demands of those who desire or on whose behalf—e.g., college admission—is desired rigorous study.

31. Social science includes historical studies, but it is assumed that history starts with analysis of social science as based on contemporary life.

32. One-half unit of rigorous study of facts, with a view to their application of the results of such study, and one-half unit of appreciative reading, etc.

Digitized by Google

33. An appreciative study.

34. Contemporary situations of social science studied, after which careful study of historical antecedents.

35–36. Courses resembling those now found, but divided into the two phases.

37. The practice of school government by pupils willing to take an active part in official action, leadership, etc.

38. Systematic study in part, appreciative study in part.

39. Appreciative reading.

40. A proposed study, undeveloped as yet in secondary education, but of utmost importance.

41. An appreciative study of phenomena and their interpretations as far as the pupils can go.

42. Systematic study of methods of effective learning.

43. An appreciative study of the part played in modern life by mathematics.

44–48. Studies designed to effect permanent mastery.

49. Classical languages and literature. Studied chiefly from the point of view of contributions to liberal education.

50. An appreciative study of the place of classical language and literature in history and in the foundations of the English language.

51. A study not yet developed, but analogous to word analysis as formerly studied.

52–53. Definite language studies, with a view to certain prescribed forms of mastery.

54. It is assumed that the objectives to be kept in view will be more clearly defined than is the case at the present time in modern language teaching.

55–62. Definite forms of mastery in accordance with pre-established standards.

63–64. Appreciative approaches on the basis of forms of literary presentation not yet organized, doubtless using translation chiefly.

65. Chiefly designed to contribute to the ends of liberal education.

66. The amateur and appreciative basis to be emphasized.

67. Prevocational usages contemplated principally.

68–71. Self-explanatory.

72–77. Self-explanatory.

78–80. Quantity might be prescribed, but particular forms left optional.

81. Prescribed and routine work required.

82. Subject may be elected, but once chosen, definite efficiency should be the outcome.

83–84. Self-explanatory.

85. A course of tests for pupils interested in particular vocations might be prescribed, perhaps to be called "prevocational training."

Digitized by Google

86–90. All of these studies placed on appreciative basis. The method is assumed to be one of intensive sampling and largely based on individual interests. Might be utilized sparingly for vocational guidance.

91–106. A particular trade must be selected, then provision made for practical instruction in it, followed by provision for technical instruction. A distinction is suggested between practical instruction in schoolshop which might occupy, primarily, a period of from one month to two years, followed by transfer of learner to commercial shop where part of time is reserved for continuation school or part-time school attendance.

In the case of any particular occupation a study on the appreciative basis of the more cultural aspects should be provided also.

Digitized by Google

OBSERVATION AND PRACTICE IN COURSES FOR TRAINING RURAL TEACHERS

C. J. ANDERSON, Stoughton, Wisconsin
WINIFRED EDSALL, Platteville, Wisconsin

One of the most difficult problems which the state school system of Wisconsin is attempting to solve is how, effectively, to train teachers for rural schools. This study deals with those phases of the problem which relate to observation and student practice teaching. For the purpose of making more intelligible the data to be presented, it is desirable that a brief survey be given of the various agencies for the training of rural school teachers in the state.

The state maintains three types of schools whose business is, in whole or in part, the training of rural teachers. Such schools are, in the order of the establishment of specialized courses for this purpose, county training schools, of which there are twenty-eight; state normal schools, six of which have rural-school departments; and high schools, twenty-seven of which have been designated by the state superintendent to carry on this work. These schools are under state control.

The county training school is a vocational school whose sole business is the training of rural teachers. The salaries of its teachers are paid by the state; the building and the equipment are furnished by the county government. In these schools two courses are offered: a one-year course for high-school graduates and a two-year course for graduates of common or graded schools. By this arrangement a high-school graduate has five years of work above the eighth grade, the last year being professional work taken in the county training school. Graduates of graded schools have two years of work above the eighth grade. In these courses are offered those subjects required in the examination of candidates for second-grade teaching certificates. These include reviews of common-school branches, algebra, English history, English literature,

Digitized by Google

arithmetic, American history, school management, observation, and practice teaching.

The course of teachers of rural schools offered in state normal schools is one of many different courses presented. It includes a review of common-school branches with the addition of botany, zoölogy, composition, American literature, methods, observation, school management, psychology, and practice teaching. At least one state normal school maintains a model rural school, where observation and practice teaching are carried on. Such normal schools are not vocational schools exclusively, for they offer, in addition to various courses for the preparation of rural-, grade-, and high-school teachers, two years of college work.

Twenty-seven high schools have been selected by the state department of education in which courses for the training of rural-school teachers are maintained. This is in accordance with an act of the legislature passed in 1913 which requires professional training for all who apply for a certificate to teach in the schools of the state, who had not taught prior to July 1, 1914. This act provides that professional training may be given at a high school, if at least three teachers exclusive of the principal are employed. The act provides, further, that the state shall reimburse the high school in an amount equal to the salary of the teacher giving the professional work.

The course of study is divided into three sections: first, required professional work. This consists of the following branches: (1) junior professional reviews, 1 unit; (2) senior professional reviews, 1 unit; (3) senior pedagogy, ½ unit; (4) practice work, school law, 1 unit; (5) observation and school management, ½ unit. The second division of the course of study includes required academic branches. These are English, 3 units; geography, ½ unit; arithmetic, ½ unit; United States history, 1 unit; citizenship, ½ unit; physiology, ½ unit; agriculture, 1 unit; domestic science, 1 unit. The required work covers 8 units of work. The third section of this course of study comprises elective academic branches. This covers 3 or 4 units of work. These units may be in Latin, or geometry, or algebra, or in any branches considered suitable by the high-school principal.

Digitized by Google

This study concerns itself with that part of the professional work entitled Practice Work and Observation, for, it is in administering such courses that one finds himself in an uncharted sea. Questions like the following continually arise: When and where should observation begin? What subjects should be observed? What records should be kept? In what grades should practice work be carried on? How much should be required? etc.

In order to ascertain current practice in administering such courses in Wisconsin, an inquiry was sent to each county training school and to each high school engaged in training teachers for rural schools. The inquiry was as follows:

OBSERVATION

1. When does observation begin?
2. How many recitations are observed per week? In what subjects?
3. What records are kept of these observations? What use is made of these records?
4. Do students observe the regular classroom teacher or the training teacher?
5. How much observation is done in country schools? Does county superintendent take students to country schools while he is on his regular inspection trips? Does he accompany classes?
6. How many times does the student observe the class which she is to teach?

PRACTICE WORK

1. When is practice teaching begun?
2. In what grades is practice work done?
3. How many class periods does each student teach per week?
4. How many weeks of practice work is required of each student?
5. What subjects are taught by student teachers?
6. What subjects are *required* of *each* student teacher?
7. How many consecutive recitations are taught in each subject?
8. Does student teacher practice in regular grade room? If so, is she in charge of the room?
9. If student does not teach in grade room, where is teaching done?
10. Does more than one student teach in the same room at the same time? What is the average size of class taught by students?

Replies were received from twenty-two of the twenty-eight county training schools and from every high-school training department in the state. An analysis of the data obtained follows:

Digitized by Google

OBSERVATION

When does observation begin?

TABLE I

	Junior Year	Or Week of Senior Year						
		1	2	3	4	5	First Quarter	Indefinite
High-school department..	9	6	8	2	1	1	.....	.....
County training schools..	2	3	.....	.....	.....	1	10	6

Table I is to be read as follows: nine high-school departments and two county training schools begin observation work in the Junior year, which is the first year in which any professional work is offered. The remaining schools offer observation work in the Senior year. Six high schools and three county training schools beginning observation the first week of school, eight high schools beginning the second week of school, etc. The replies of the county training schools were indefinite, ten schools stating that the observation begins during the first quarter and six merely stating that such work is given in the Senior year. Upon further inquiry it was found that experience has demonstrated the advisability of beginning observation work as early as possible. Next year most of the schools offering this work will begin observation in the Junior year.

How many recitations are observed per week?

TABLE II

No. of Recitations	1	2	3	4	5	Over 5
High-school training department.....	1	6	2	2	6	10
County training schools.....	1	2	.....	1	6	6

TABLE III

In What Subjects Observed?

Subject	Reading	Arithmetic	Geography	Language	Phonics	History	Music	Writing	Spelling	Physiology	Gymnastics
High schools.....	27	27	23	27	16	17	....	13	13	14	....
County training schools....	17	15	16	16	8	8	9	8	10	....	1

Digitized by Google

Tables II and III give the answers to question 2 of the inquiry on Observation. From Table II it is seen that the majority of high schools and county training schools require five or more classes to be observed each week by students. Every high-school department requires observation in reading, arithmetic, and language. Nine county training schools require observation in music. No high school emphasizes this. High schools as a rule observe work in physiology. This subject was not mentioned as being observed by classes in county training schools. The table indicates that the chief emphasis in observation is placed on reading, arithmetic, geography, and language. Sixteen high schools and fifteen county training schools observed work in all of the grades.

The answers to question three under Observation indicate that in only three high schools and in two county training schools are there no records of these observations kept. All the rest make notes and outlines which are used as a basis for class discussion and as a reference for future teaching.

In fifteen high schools and in fourteen county training schools the work of the regular classroom teacher, only, was observed, while in eleven high schools and in four county training schools the teacher in charge of observation work taught demonstration classes for the benefit of the training-course students.

TABLE IV

AMOUNT OF OBSERVATION DONE IN RURAL SCHOOLS

No. of Days	None	1	2	3	4	5	Over 5	Indefinite
High schools	.....	2	6	2	2	8	1	6
County training schools	1	.....	8	1	.....	8	1	2

Observation of the regular work in a rural school is extremely important. Here only can prospective teachers see teaching done under normal rural conditions. Yet no rural schools were visited by one county training school. The distribution appears to be bimodal, two and five being the most frequent numbers of visits made. The means of transportation presents a serious difficulty in attempting rural-school visitation, yet the problems of the one-room country school are of such a nature that they can be studied

Digitized by Google

best where they occur. At least five days per year should be spent in visiting and observing the work in these rural schools.

The latter part of question 5 under Observation was asked in order to ascertain the amount of co-operation between the county superintendent of schools and the schools where the teachers whom he supervises are trained. The inquiry revealed the fact that this official accompanied classes on their visits to rural schools in seven cases reported by high schools and in five cases reported by county training schools. Seven high schools and three county training schools reported that the county superintendent carried one or more students with him on his regular inspection trips. These figures do not reveal any great amount of co-operation between the professional schools for rural teachers and the inspectors of their product. Surely no better opportunity to become acquainted with prospective teachers can be found than is given by such trips. Here there is need of reform. It is common knowledge in one county of the state that the chief administrative school official has neither visited nor inspected the training course for rural teachers since its establishment.

TABLE V

HOW MANY TIMES DOES STUDENT OBSERVE CLASS WHICH SHE WILL TEACH?

Times	1	2	3	4	5	Over 5
High schools	1	2	4	0	13	7
County training schools	1	8	1	1	10	1

According to Table V, the student in the average high school or county training school will visit a class for observation purposes five times before she begins to teach the class. The usual custom is to visit a class each day for a week prior to entering upon teaching. When the pupil has taught the required time in one subject, she spends several days in observation again before beginning to teach another subject.

The school year of the county training school is forty weeks in length. The eleventh week is the beginning of the second quarter of school. Table VI indicates, then, that in county training schools, practice teaching begins, usually, at the beginning of the

Digitized by Google

first or second quarter. There is little or no uniformity among the high schools in this matter. The fifth week is both the median and the mode for the beginning of practice work. Some high schools wait until the beginning of the second semester before setting this branch of professional work into operation. The first four weeks of the high-school year are devoted to observation work and to the adjustment of the school machinery.

TABLE VI

PRACTICE WORK: WHEN PRACTICE TEACHING BEGINS

Week	1	2	3	4	5	6	7	8	9	10	11	16	18	19	21
High schools	...	2	1	2	9	5	1	1	1	1	1	...	3	...	...
County training schools	6	1	...	...	1	...	...	...	...	...	6	1	...	4	2

Table VIII shows the effect of local administrative difficulties. In some schools, particularly in county training schools, only a few grades are available for practice work. In a few of the county training schools are found model departments of from four to six grades. Other county training schools do their practice work in the city schools. Grades one to six inclusive contain the pupils which most nearly approximate these of rural schools in age and

TABLE VII

IN WHAT GRADES IS PRACTICE WORK DONE?

Grades (inclusive)	2–4	3, 4	1–4	1–5	1–6	1–7	1–8
High schools	1	.....	2	4	10	5	5
County training schools	.....	1	5	.....	10	2	3

progress. This is evidenced by the fact that ten high schools and an equal number of county training schools use these grades for practice teaching. Trempealeau County in Wisconsin has 106 rural schools. In 1914, there were graduated from these schools 55 pupils. In 1915, the graduates numbered 90. This means that the average is less than one eighth-grade pupil per school. It also indicates that there is little necessity for practice work beyond the sixth grade, for there are very few pupils in the rural schools more advanced than this grade.

Digitized by Google

The number of weeks of practice work required of student teachers is shown in the accompanying chart. The upper section of the chart shows the number of weeks of teaching required in each of the twenty-seven high-school departments. The lower section shows the same facts for county training schools. The number of weeks of student teaching required in each school is placed at the right of the name of the school. For the high-school departments the lower quartile is 18, the median is 20, and the upper quartile is 28. This gives a quartile range of 10. This means that the middle 50 per cent of the schools require from 18 to 28 weeks of practice work. In the county training schools the lower quartile is 10, the median 12, and the upper quartile 20, with a quartile range of 10. The middle 50 per cent of these schools require from 10 to 20 weeks of practice work. In this respect the high-school training departments appear to be stronger than the county training schools. Nine high schools require the median amount of time, while nine county training schools require but 10 weeks of practice work. The state department of education makes this recommendation: "Most teachers are finding that 20 weeks' work in practice is far more satisfactory than the 10 weeks' work that has been required. Beginning with the school year of 1915–16 a minimum of 15 weeks of practice should be required of all students in high-school training departments, and 20 weeks is strongly recommended. This lengthened period makes it possible for every student to teach at least three classes for 5 weeks each."

Chart B indicates the subjects, required or elective, which are taught by practice teachers in high-school training departments and in county training schools. The chart is to be interpreted as follows. Triangles whose altitudes are on the left and nearest to the names of the high schools which maintain training departments refer to these schools. Triangles which point to the left refer to county training schools. Solid triangles indicate those subjects required to be taught in high-school training departments. Triangles with horizontal bars refer to required subjects in county training schools. Triangles shaded by vertical bars indicate subjects which may be selected either by student or by supervisor.

Digitized by Google

Every high-school department in the state requires practice work in reading. The same requirement holds for all county training schools with the exception of two. Arithmetic occupies much the same position in high schools, being required in all schools but two. Four county training schools make the teaching of arithmetic elective. Seventeen out of twenty-seven high-school training departments require language to be taught. About one-half of the county training schools make this requirement. Geography is an elective in the majority of schools. Less than half of the schools offer history and spelling even as an elective. The chart indicates clearly where the stress is laid in practice teaching. Evidently reading, arithmetic, and language are considered the basal subjects and are named in the order of their importance. County training schools offer a wider range of subjects for practice work than high schools do. Many subjects indicated as electives are elective from the supervisor's standpoint rather than from that of the pupils.

Table VIII is to be read as follows: In high-school training departments the median class taught by students has from 9 to 11 pupils in it. The median for county training schools is 15 and over. The size of the class used by students in county training schools is determined more by necessity than by choice. Many such schools must take what they can get from public-school authorities. A class of from 6 to 8 would more nearly approximate

TABLE VIII

SIZE OF CLASSES TAUGHT BY STUDENT TEACHERS

Size	6–8	9–11	12–14	15 and over
High schools	4	13	3	7
County training schools	2	4	5	11

the actual rural class in size. In many rural schools, the majority of classes have an enrolment of less than 5. A class of 15 is too large for a student teacher to handle when she begins her practice work. So, for the purpose of approximating working conditions in rural schools, and as a matter of expediency, the size of practice classes should be reduced in many schools.

Digitized by Google

In attempting to draw conclusions from this study one is confronted with the fact that the problem of training rural teachers effectively has not as yet been solved. There is too great a diversity of procedure to enable one to picture conditions as they should be. It is evident that the various agencies for carrying on the work of training rural teachers have not co-operated in a way that would enable each to profit by the other's experience. Yet many facts stand out which are of value for comparative purposes.

With reference to Observation, experience shows the advisability of beginning it as early in the course as possible. Stress in observation is laid on reading, arithmetic, and language. The work in rural schools should be observed in as great quantity as possible. Before students begin their practice teaching in any subject, they should observe the work in that subject under the regular classroom teacher for some time. Practice work in one subject at a time extending over a period of at least 20 weeks is more valuable than practice in several subjects at the same time for a shorter period. This practice work should include teaching in arithmetic, reading, and language for all students in some one or more of the first six grades. Classes taught by student teachers should not be larger than 6 to 8 pupils. Co-operation between county superintendents and such training schools, co-operative studies carried on by a number of schools, unity of aim and harmony in administration, are required for the successful solution of this important problem.

Digitized by Google

THE ARLINGTON PLAN OF GROUPING PUPILS ACCORDING TO ABILITY IN THE ARLINGTON HIGH SCHOOL, ARLINGTON, MASSACHUSETTS

FREDERICK E. CLERK
Seattle, Washington

THE PLAN

This plan is designed to provide a method for grouping together pupils of about the same ability, as determined by the teachers' observations and the pupils' grades. The grades used for making the determinations at the beginning of the year are the grades of the previous year in the same or a similar type of subject. At the end of the first two months of the year pupils are redistributed among the groups where it seems that they have been misplaced. Changes are made every two months thereafter throughout the year whenever it seems necessary. In practice few changes have been found necessary after the first two months.

There are three classifications in every subject in which the plan is used, rated as (1) honor, (2) medium, and (3) slow. Whenever there are less than three classes in a subject, they are rated the same as if other groups existed, that is, they are called either honor, medium, or slow, according to the character of the work they are doing. In these groups the pupils who vary from the type of the group are treated according to their individual variations, as they would necessarily be in a more heterogeneous class where no attempt is made to select the groups on a basis of individual ability, but where a definite attempt *is* made to treat the pupils according to their individual capacities. The plan is applied to the classes in mathematics, languages, history, commercial subjects, and sciences. It is not attempted in the laboratory classes, such as mechanic arts, physics, chemistry, household arts, bookkeeping, drawing, etc., where the instruction is largely individual. It is applied in some of the latter classes where they receive group instruction.

Digitized by Google

The grades given to the pupils represent actual achievement within the limits in which they occur. Since January, 1916, a subscript has been given with the grade to indicate the group in which it was given; as, A_1 means A in an honor group, D_3 means D in a slow group, etc. The grades represent the following values: A, 90–100 per cent, inclusive (excellent work); B, 80–89 per cent, inclusive (good work); C, 70–79 per cent, inclusive (fair, passing work); D, 67–69 per cent, inclusive (doubtful, passing work); and E, less than 67 per cent, failure.

The honor groups do more work in a given subject than the medium and slow groups. The latter two are expected to cover at least the minimum requirement for promotion. The work done by the medium and slow groups is about the same as that required of a regular class, based on traditional methods of selection. In order to earn promotion in any group a pupil must have an average better than D. Marks below B are seldom found in the honor groups and seldom above C in the slow groups. No college certificate is given in a subject in which the average for the year is below B_2, and a certificate is not guaranteed even with this average.

The method of instruction is varied to suit the caliber of the groups. In the first groups the assignments are longer, the work in the class is more rapid, less emphasis is given to instruction and drill, the instruction is less formal, the classes are larger, and the classroom work is more class work than individual. In the lowest groups, which are smaller than the others, the work is as largely individual as the size of the classes will permit.

The mechanical part of segregation commences in April for the following year, after the registration cards are filled out by the pupils, approved by the parent, and teacher adviser, and passed to the office for the principal's approval. After determining the number of classes in each subject, the pupils' names by years (i.e., Freshman, Sophomore, etc.), arranged alphabetically, are written on long slips of paper ruled as follows: first column, the pupils' names followed by several half-inch columns for subjects. This makes a small space about one-half inch square after each pupil's name and under each subject that he takes. A small x mark is placed after each pupil's name in each square under subjects taken

Digitized by Google

by him. These long slips are then sent to every teacher who has had the pupil during the past year in the same or a similar subject. The teacher then marks 1, 2, or 3 in the square opposite the pupil's name and in the column belonging to his subject to indicate the group in which the teacher thinks the pupil should be placed. The slips are then returned to the office. Then comes the most difficult task of all, viz., arranging the program of recitations for the entire school, giving each teacher his special subject, avoiding conflicts of subjects, and reducing to a minimum the possibility of conflicts in grouping pupils according to ability.

It is important to note that pupils are divided according to ability, by subjects, for while it is generally true that pupils who are in the first group in one subject are in the first group in most subjects, it does not always follow; e.g., a pupil may be in the first (honor) group in Latin and at the same time in the third (lowest) group in geometry and in one of the medium groups in English. A pupil, to remain in an honor group in any subject, must maintain a mark of A or B, though he may be required to remain in an honor group if the teacher is reasonably certain in his judgment that the pupil's ability is commensurate with the demands of the group. When the circumstances seem to justify it, however, a pupil may be put "on trial" in any honor group in which he happens to be; if he should fall below passing in any subject in any group it is with the understanding that he may be demoted from his honor group if he is not able to pass all his subjects in his respective groups, the idea being that it is better for the pupil to put less time and energy on the one subject and more on the others with the hope of passing in some group in all subjects. This arrangement tends to prevent overreaching or undue concentration on one subject at the expense of others that are equally important.

Seventy points are required for graduation (a point is equivalent to one prepared recitation per week for 40 weeks). No pupil can continue taking over 23 points a year unless he maintains a standing of A or B (80 per cent, or better) in all subjects. Every year some pupils are graduated who have completed the four-year course in three years. Pupils are not allowed to sacrifice quality of work for variety or quantity.

Digitized by Google

THE AIM OF THE ARLINGTON PLAN

The aim of the Arlington plan is to meet the situation referred to by Dr. Monroe,[1] who says:

> It is obviously true that the American schools, in emphasizing the democratic purpose, have minimized the selective function of the secondary school. *The tendency in our own schools is to devote more attention to the sub-normal or to the mediocre than to the super-normal.* It would be entirely possible to preserve both the democratic and the selective functions of the secondary school if the false democracy which demands uniform treatment for all were replaced by the practice of *differentiating students according to their interests, subject-matter according to its social significance for the student taking it, and methods according to the individual abilities of the students.*

The differentiation of the courses of study into technical, college, general, commercial, and household arts courses meets the demand for differentiation of the students according to their interests, and of the subject-matter according to its social significance for the student taking it. This is a common practice now among secondary schools. It is the third factor referred to by Dr. Monroe, however, that the Arlington plan is especially designed to meet, viz., *the differentiation of method according to the individual abilities of the students.* The differentiation in method is perforce accompanied by some differentiation in the quantity and quality of the subject-matter taught. The Arlington plan, therefore, aims to *provide for the intellectual wants of pupils according to their ability.*

DISCUSSION OF THE CLAIMS MADE FOR THE ARLINGTON PLAN

On the basis of six years' operation of the plan in the Arlington High School, together with a thorough analysis of the grades given in all subjects for two years by two-month periods, and a comparison of the grades of one year with the grades of the same year in a neighboring high school, the claims for, and objections against, the plan are either refuted or justified as follows:

1. *It stimulates most pupils to work.*—The stimulus is certainly present for the first groups and for those who have a chance of getting into the first groups; it is active among those in the lowest groups who, experiencing a sensation of progress, are encouraged

[1] P. Monroe, *Principles of Secondary Education*, p. 9. Italics not in the original.

Digitized by Google

to greater effort. There are some in the middle group, however, who seem content to remain where they are, satisfied with the minimum passing mark and lacking the necessary ambition either to get into the first group or to make a better grade in the middle group. It is doubtful whether these latter pupils would be stimulated to maximum effort under any other system; it is certain that they are not under the Arlington plan. The sweeping claim that all pupils are stimulated to greater effort is not justified but the claim that the Arlington plan provides an added stimulus over the traditional method of grouping pupils has been unquestionably established.

2. *The temptation to teachers to concentrate a recitation among the brighter pupils of the class is removed.*—To a certain extent this is true. The extent is measured by the homogeniety of the group. It would not be a virtue of the plan if all of this temptation were removed, for, if there were no variation in mentality among the individuals of the class, the stimulus afforded by the brighter pupils would be lost, the opportunity for developing leaders would be practically non-existent, and many valuable factors of teaching practice would be handicapped. The matter of this temptation to have the brighter pupils do all the reciting lies largely with the individual teacher. It is certainly true that less damage is done by this practice under the Arlington plan than in most high schools, because the recitations of the brighter pupils of a group are practically always within the scope of the ability of the other members of the group. This is not true in groups where the variation in ability is great. It would then be more justly claimed that less damage is possible by this tendency on the part of teachers to concentrate the recitation among the brighter pupils in the Arlington plan where the differentiation within the group is less, than in the groups where the differentiation of ability is greater.

3. *The net amount of work is greater than under other plans.*—The first groups do more than the work required for promotion and the other groups do as much as is required for promotion or graduation in the ten high schools around Boston with which the Arlington School has been compared. A comparison of the courses of study of ten large high schools in the environs of Boston with the Arlington

Digitized by Google

High School shows that the Arlington School is offering about the same subjects and covering as much of them as the others. As a matter of interest it was noted that in some courses, especially the college and technical, the work was almost identical among these schools. As over 50 per cent of the graduates of the Arlington High School go to college, it is evident that a large part of the work is quite definitely determined. The school has the college certificate privilege wherever it is granted in New England. To the extent in which the work of the first groups is more than that of the others and to the extent in which elimination and failure is reduced (as will be discussed later) may be measured the greater amount of work accomplished under the Arlington plan.

TABLE I

COMPARISON OF PUPILS FAILED AND ELIMINATED IN SEVERAL GROUPS OF SUBJECTS

	English	Latin	Science	History	Mathematics	Commercial Subjects	German	French	Average
Failed:									
Illinois schools*	8.5	9.3	11.1	9.3	15.3	9.6	7.8	5.5	10.1
Arlington.....	5.2	4.9	5.0	8.4	10.6	8.6	5.6	6.1	5.2
Eliminated:†									
Illinois schools*	7.9	10.2	12.6	11.8	13.4	10.8	10.1	7.7	10.6
Arlington.....	7.8	9.0	8.2	12.6	15.7	8.7	3.1	12.5	11.8
Totals:									
Illinois schools*	16.4	19.5	23.7	21.1	28.7	20.4	17.9	13.2	20.7
Arlington.....	13.0	13.9	13.2	21.0	26.3	17.3	8.7	18.6	17.0

* *School Review*, XXI, No. 6, 1913, 415.

† Eliminated is interpreted to mean those who left school or dropped a subject for any reason.

4. *Fewer failures are the result of this plan.*—A careful search of the literature available reveals but little of statistical value. Table I represents a comparison between the Arlington High School, and a group of high schools in Illinois. It represents those who failed and those who were eliminated in one year.

Apparently the figures given in Table I show that the total elimination and failure is less under the Arlington plan than under the ordinary plan. The elimination is apparently greater in the Arlington School by a little over 1 per cent, but the failures are about one-half those in the Illinois schools. The low number of

Digitized by Google

failures in Arlington is partly accounted for by a rule that requires a pupil to drop a subject after failing in it four consecutive months. While he is actually a failure, he is counted as eliminated. This would have a tendency to increase the number of those eliminated and reduce the number of failures at the end of the year. The relative values of these factors as between the two sets of statistics is not very significant, but the total failure and elimination seems to argue in favor of the Arlington plan.

TABLE II

COMPARISON OF PUPILS FAILED IN PATERSON AND DENVER HIGH SCHOOLS WITH PUPILS FAILED *and Eliminated* IN ARLINGTON HIGH SCHOOL

	English	Ancient Language	Modern Language	History	Mathematics	Commercial Subjects	Science	Average
Paterson*	14.9	15.9	22.8	11.5	23.6	12.4	18.8	16.1
Denver†	13.8	16.5	15.2	14.5	21.4	10.5	13.9	15.6
Arlington	13.0	13.9	15.1	21.0	26.3	17.3	13.2	17.0

* *Report of School Department*, 1914, Paterson, New Jersey.

† *Report of School Department*, 1913, Denver, Colorado.

Table II represents the total elimination and failure in Arlington for one year, in percentages, as compared with the failures at the end of a year's work in the Paterson and Denver high schools, in which two cities no mention is made of those eliminated. It will be seen that Arlington has a lower total percentage *failure and elimination* than either of these cities have of failure alone, in four out of seven groups of subjects. In the total average, Arlington is within 1.5 per cent of Denver and 1 per cent of Paterson. It seems reasonable to assume that the normal amount of those eliminated would raise the figures for Paterson and Denver to a point where the comparison would be very favorable for Arlington. As far then as statistical comparison of this matter is possible, the indications seem to be that the Arlington plan tends to reduce the total failure and elimination.

5. *The ratio of improvement in this plan tends to be greater than in other methods of grouping.*—The data on this point are taken from a study of the Arlington plan made by Mr. Richard P. Bonney in 1915, in which he compared a neighboring school with the Arling-

Digitized by Google

ton High School, making his comparison chiefly on the basis of the ratio of improvement of the several studies. Referring to the Arlington School, he says: "The average ratio of improvement for the five studies on the differentiated plan was 0.91 while the ratio for the studies not under this plan was 0.38. A noticeable difference existed within the school in favor of the studies operated on the Arlington plan." He observed a similar though not so great, difference between the same groups of studies in the other school investigated, in which none were on the Arlington plan. Owing to the many factors that entered into this study, due chiefly to the difference in the size of the schools and a different system of grading, it is not possible to accept this comparison as final. It seemed to indicate that the Arlington plan was better for the highest and lowest groups, but not so good as the *laissez faire* method for the middle group. The claim that the ratio of improvement in the Arlington plan is greater than in other plans has yet to be substantiated. It is doubtful if it ever can be proved conclusively, as so many factors other than the grouping will affect this ratio.

6. *The possibilities of discovering unusual ability of pupils for special subjects are greatly increased.*—Under the Arlington plan it is necessary for the teachers to keep constantly in mind the individual differences and characteristics of the pupils, because they must report on them in order to keep the groups properly distributed. Under the usual *laissez faire* method the teachers are required to give no definite attention to these matters, and it is left to the individual teacher to discover a pupil's special qualities and to encourage them at his own initiative outside of the regular school program. Some teachers have little capacity or inclination for this "missionary work," and the pupils suffer accordingly. Under the Arlington plan the "missionary work" becomes a part of the regular school organization, and the teacher who would not find it possible to consider the individual variations in his class under the traditional method of grouping is sufficiently guided and stimulated by the administration of the Arlington plan, not only to aid efficiently in determining the capabilities of pupils, but finds his work lightened by the better organization in his classes.

Digitized by Google

Under this same heading it is to be observed that the pupils themselves are encouraged to self-analysis, and many conferences are held between teachers and students, the aim of which is to help the pupil to "discover" himself. A system of pupil advisers has been developed to supplement this feature of the plan. The adviser, the teacher of the subject in which the pupil is to be grouped, the pupil himself, and often the pupil's parents are involved in the process of grouping the pupil according to his ability. With these organized attempts to "discover" him it is certain that the opportunities of getting definite, reliable results are greatly in excess of the chances under a *laissez faire* method. It is a matter of a definite method versus no method at all.

It has been objected in this connection that the pupils are not qualified to pass judgment on their own abilities. The Arlington plan has provided means for directing the pupil's judgment and training it with the aid of his teachers. No scheme ever developed will prevent pupils from passing judgment on their own qualifications. It would be unfortunate if such a scheme existed. Since pupils will estimate their own qualifications, and since reliable knowledge on this matter is essential to the full measure of success in life, it may be argued that a plan that encourages introspection on the part of the pupils and attempts to guide them in the exercise of this function is more nearly meeting the demands of a well-rounded training than any scheme which omits it.

7. *It stimulates an increase of interest in the school on the part of parents, friends, and pupils.*—The attention given to the analysis of the capabilities of pupils in Arlington has had the effect of bringing the parents of the pupils and other citizens of the town in close touch with the school. Parents know that their children are being grouped on a basis of ability, and the majority of parents are co-operating with the school and accepting the judgment of the school, with gratitude. A small but negligible number have felt wronged when their children were classified with the lowest groups. Whether the interest on the part of parents is sympathetic or not, the essential fact to be noted is that interest is aroused. After one or two conferences unsympathetic interest usually disappears.

Digitized by Google

The citizens of the town, particularly employers of young people, have come to regard the school as a place where they can get exact and reliable information concerning prospective employees. This is, of course, true of most secondary schools to a certain extent, but it has developed rapidly in Arlington under the present grouping system. The process of getting the information necessary for grouping pupils has brought out many other facts of value concerning the pupils and has led to a special form of permanent record card which not only contains the attendance and scholarship records, but makes a yearly memorandum of the pupils' honesty, neatness, punctuality, reliability, bent, future plans, home conditions, special interests, health, and miscellaneous data. This record is made out yearly by the pupils' adviser, with the aid of other teachers. It may be said that the Arlington plan tends to make the school office a clearing-house for all information that will lead to the most reliable analysis, instruction, and placement of each of its pupils.

8. *The initiative of pupils is increased.*—In addition to the stimulus to work as discussed in subhead 1 of this section, there is developed an increase in initiative in the lowest groups that is of inestimable value, particularly to the pupils who are lowest in ability. Pupils who find it embarrassing, if not impossible, to recite in a middle or high group, feel little or no discomfort in reciting in a group where they realize that the danger of ridicule (real or imagined), because of the superior knowledge of other members of the class, is eliminated. Children of secondary-school age are supersensitive to ridicule, and many a pupil has been seriously handicapped because of untimely criticism by a teacher or, what may be even more effective, the thoughtless ridicule of a classmate. In all the groups under the Arlington plan there seems to be a freedom of student participation in the exercises of the classroom, which, while it may not have been directly the result of the Arlington plan alone, at least is encouraged and developed by it.

9. *The percentage of elimination is reduced.*—According to the statistics on p. 32, it would appear that Arlington compared unfavorably with other secondary schools in the matter of elimination. It was explained that a special rule, peculiar to Arlington,

Digitized by Google

would tend to increase the number of eliminations by subjects. The fact that a failure for four consecutive months makes it necessary for a pupil to drop a subject means a large percentage of subject elimination. Table III presents the percentages of elimination (those who left school for any cause) for each class in the Arlington High School since the class that entered in 1903 and graduated in 1907. The table is arranged in groups of three years each. The first three years represent the rate of elimination before the present grouping plan was adopted. The other three-year groups show the rates of elimination and graduation since the plan has been in

TABLE III

PERCENTAGE OF GRADUATION AND ELIMINATION IN ARLINGTON HIGH SCHOOL

When Entered	When Graduated	Number Entering	Number Graduating	Percentage Graduated	Percentage Eliminated	Three-Year Period
1903.....	1907	65	16	24.6	75.4	Percentage graduated, 33.5
1904.....	1908	72	29	40.3	59.7	Percentage eliminated, 66.5
1905.....	1909	72	25	34.7	65.3	
1906.....	1910	82	35	42.9	57.1	Percentage graduated, 50.5
1907.....	1911	86	47	54.3	45.7	Percentage eliminated, 49.5
1908.....	1912	113	60	53.1	46.9	
1909.....	1913	112	68	60.7	39.3	Percentage graduated, 58.8
1910.....	1914	114	78	68.4	31.6	Percentage eliminated, 41.2
1911.....	1915	175	90	51.4	48.6	

force. A steady increase in the percentage of each class to remain and graduate, and a corresponding decrease in the percentages eliminated characterize the figures. In the three years immediately preceding the adoption of the Arlington plan, a variation in the ratio of the percentage is noticeable. No explanation for this is available. Since 1910, however, there has been a steady increase in the percentage graduating, with two exceptions—a decrease of 1.2 per cent in 1912 and of 17 per cent in 1915. There seems to be no explanation for the drop in 1915, except that the class contained an unusual number of poor-quality students who were near the dropping-out line, and during its third and fourth years was

Digitized by Google

greatly handicapped by an overcrowded school and by a two-session plan which divided the school day to accommodate the entire enrolment.

Table IV presents a comparison which seems to argue that the Arlington plan does tend to reduce the percentage of elimination. It is difficult to find any other way to explain the decrease in elimination in Arlington since the plan was adopted. Indeed, there seem to be some reasons why the trend should be in the other direction. During the past few years the town has grown from a wealthy, steady, independent, conservative town of few changes, to a Boston suburb influenced by the atmosphere of the metropolitan district,

TABLE IV

PERCENTAGES OF PUPILS OF ENTERING CLASSES ELIMINATED AND GRADUATED IN REGULAR FOUR-YEAR HIGH-SCHOOL COURSE, ACCORDING TO DR. E. L. THORNDIKE, DR. L. P. AYRES, AND DR. G. D. STRAYER, COMPARED WITH ARLINGTON DURING THE THREE YEARS BEFORE, AND SIX YEARS FOLLOWING, THE ADOPTION OF THE "ARLINGTON PLAN"

	Distribution of Pupils in Recitation Groups without Reference to Individual Ability				Distribution in Classes According to Ability of Pupils	
	Thorndike	Ayres	Strayer	Arlington 1907–9	Arlington 1910–11	Arlington 1912–15
Eliminated..	70.0	75.0	67.0	66.5	49.5	41.2
Graduated..	30.0	25.0	33.0	33.5	50.5	58.8
	100.0	100.0	100.0	100.0	100.0	100.0

subject to many residence changes accompanied by an influx of people of moderate means who are just able to send their children to high school, among whom the percentage of elimination would tend to be high.

Until the current year the program has been enriched only with the commercial course to appeal to any special aptitudes or interests of the pupils or to those who see a vocational opportunity in the high school. The influx of new residents has added to the enrolment, to a certain extent, after the first school year, but not enough to affect the relative values of the above percentages.

The figures presented by Thorndike, Strayer, and Ayres are estimates based on a wide field of observation covering many high

Digitized by Google

schools, and represent what may be called an average condition. Evidently the situation in Arlington six years ago was about the average, but since that time there has been a tremendous change, elimination dropping from 66.5 for the three years 1907–9 to 41.2 per cent for the three years 1913–15, and graduation showing a corresponding increase. While undoubtedly many factors that are undeterminable at the present time are more or less responsible for this change, it is reasonable to suppose, in view of the figures presented from the other sources, that the plan of grouping pupils according to ability has had its influence.

DISCUSSION OF THE OBJECTIONS MADE AGAINST THE ARLINGTON PLAN[1]

1. *There is danger of overreaching in the crowding of bright pupils.*—This objection is more imaginary than real. It is hardly adaptable to statistical verification or denial, but the report of Mr. Fred C. Mitchell, who introduced the plan at the Arlington High School and continued it there for six years, is to the effect that this overreaching of pupils, or the attempting to do more than they are able, is no more of a danger under this plan than under any other, provided there is reasonable watchfulness on the part of the teacher, and that the school is reasonably solicitous concerning the mental hygiene of its students. That additional stimulus is given to the ambition of the pupils is evident, and in the case of the few already ambitious the extra stimulus probably would result in overreaching if there were no teachers effectively to guide the ambitious. It has been my own observation in Arlington that, owing to the fact that the attention of the teacher is officially, and more or less constantly, directed to the matter of the pupils' ability, the matter of the pupil working within his limits receives more and better attention than it otherwise would receive at the hands of the average teacher.

2. *There is danger of reducing the work of the lowest division to a point where progress is too slow and stagnation sets in.*—This is a

[1] These objections were raised by members of the Massachusetts High School Masters' Club at a meeting in Boston, Massachusetts, where the Arlington plan was presented for discussion by Mr. Fred C. Mitchell.

Digitized by Google

matter the control of which is not inherently bound up in the Arlington plan, but it is a matter of administrative efficiency such as it would be in any system. If a group were so slow as not to be able to do the work required by the course of study when separated in smaller groups and instructed by a method more nearly fitted to their needs than they would be in the usual secondary-school group, then it is obviously true that the pupils are attempting work that is clearly beyond them, and they would have to do as pupils do who fail under other circumstances. The Arlington plan does not permit any group to do work of a quality or quantity less than that required as the standard for the school. Those in the third group in any subject must do as well in order to pass as those in the middle group, but not as well as those in the first group. The difference between the middle and the lowest group lies in the difference of the method of instruction and in the size of the class. Under these favorable conditions adapted to the needs of the slower pupils, most of them are enabled to reach the standard required for passing. Stagnation is less possible in the Arlington plan than in the usual distribution of pupils because the work is less often so far beyond a pupil that progress is impossible.

3. *Dull pupils are deprived of the stimulus of contact with keener minds.*—If the groups were absolutely homogeneous, this would be a justifiable criticism, but they are not. They are less heterogeneous than high-school classes usually are, but they are not so homogeneous that there are no individual differences within the group. There are always those at the top and those at the bottom of the groups, no matter how homogeneous they become. It has been my observation that under the Arlington plan there is an added stimulus to that afforded by the presence of the keener intellects within the groups, viz., the stimulus afforded by the chance to make a place in a higher group.

4. *Frequent transfers disturb the organization of the school.*—This would be true if the transfers were frequent, but it is found that once the plan has been thoroughly established, frequent transfers are not necessary. The organization of the school is disturbed at the end of the first two-month period when most of the transfers occur, but I am inclined to believe that the increased effectiveness

Digitized by Google

of the organization after the transfers are arranged justifies the disturbance while they are being made. Occasional changes are made throughout the year, but not enough to cause any disturbance noticeable in the organization of the school. A careful grouping at the start assures a fairly constant distribution. Pupils do not change much in ability, though our judgment of their ability is not always accurate. It is usually a mistake in judging a pupil's ability that makes a change from one group to another necessary. Pupils rarely, if ever, change from a higher to a lower group because of a real change in ability, but they often change from a lower to a higher group apparently because of a change in ability, but probably because of a change in ambition or effort.

5. *Transfers to lower groups tend to discourage those transferred.*—This objection seems to be substantiated by my observation. Pupils who have been transferred to lower groups have shown discouragement and disappointment when changed. Usually this discouragement has been but temporary, and has been easily dissipated by an explanation of the advantages of working in a group within one's limitations. It is my own conviction that the discouragement occasioned by these transfers is less damaging than the discouragement which accompanies the knowledge on the part of a pupil that he is in a group that is doing work beyond his powers and which is progressing at a rate faster than he can go. The element of discouragement to the conscientious, but incapable, student is present in any system of promotion or grading. The total amount of discouragement, if it is to be measured by failure and elimination, is less in the Arlington plan than in the plans of grouping that are in common use.

6. *Pupils in lower groups tend to underestimate themselves.*—This tendency has not yet become apparent in the Arlington High School. It is a difficult matter to determine. Little is known of just what the average high school pupil does think of himself. It has been said waggishly, but with a tendency to truth which seems to be self-evident, that "you can always tell a high-school pupil—but you can't tell him much." Possibly any influence that encourages pupils to underestimate themselves may be desirable. This much, however, has been observed at the Arlington High School,

Digitized by Google

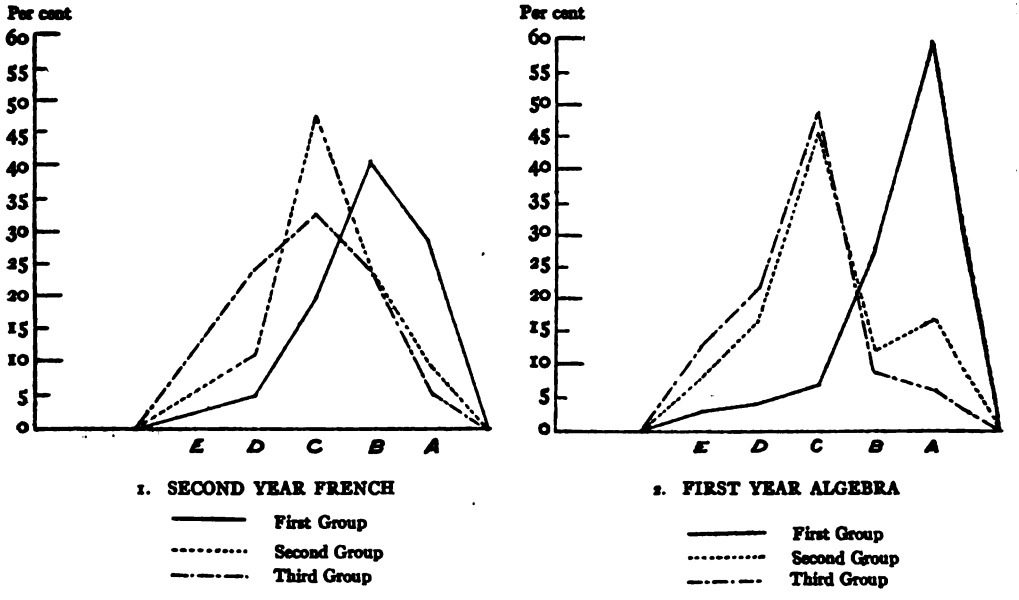
that pupils in the lower groups apparently have a more nearly exact estimate of themselves than pupils in the other groups. There is a tendency to overestimation in the upper groups rather than a tendency to underestimation in the lower classes. This is the real criticism, if any of this character is valid. I consider it unimportant, however; it is one of the evidences of youth and has been observed even in Sophomores at college.

7. *It establishes a "caste" system which is undemocratic.*—As a matter of fact, pupils do not select their friends on a basis of scholarship. There is no evidence in the Arlington High School that the pupils of any one group have any different feelings toward the pupils of other groups than they have among themselves. The incidental associations in the classrooms naturally contribute their share toward the making of friendships, and in so far as these associations are the result of the plan of grouping, the plan is responsible. Pupils are likely to make their friends among those who are congenial among their classmates. As their classmates are selected by a standard of ability, it is true that the friendship groups under the Arlington plan would tend to show a uniformity as to mental ability, just as in other systems they would tend to show a uniformity based on the particular method of selection. The "extra curricula" activities of the school, however, are fully as varied as those in the average large high school, and in all the student elections there has never appeared any evidence of the influence of any particular scholarship group. The leaders in scholarship are not always the leaders in student life. Evidence of this fact is revealed by the necessity of a rule which requires the faculty approval of all elections made by the students in all student activities. This rule was found necessary owing to the tendency of the pupils to elect popular, but otherwise incompetent, pupils to positions of responsibility in student activities.

8. *The groups are so homogeneous that leaders in them are not developed.*—This objection is adequately refuted by the conditions in the Arlington High School. The homogeneity of the group as to mental ability is a safeguard against the dangers of leadership too highly developed, in which the leaders get so far beyond the rest of the class that all hope of ever doing as well as the leaders is

Digitized by Google

lost. This danger is minimized under the Arlington plan, and the hope of catching the leaders is always a stimulus to other members of the group. It would be quite impossible to select a group of about twenty pupils so homogeneous that there would not be some individuals in it who would stand out as the head of the group in mental ability. As shown under subhead 2, p. 30, the stimulus afforded by the greater homogeneity of these groups develops rather than retards the factors that stimulate leadership and keep



DIAGRAMS 1 AND 2.—Graphs showing the relative percentages of *A*'s, *B*'s, *C*'s, *D*'s, and *E*'s in different groups in French and algebra.

NOTE.—A is the highest mark in scholarship, E the lowest.

the process active. The graphs accompanying this section indicate, not only sufficient heterogeneity within the group, but also the possibilities of active competition for leadership. The graphs represent the actual distribution in the three groups in algebra and French, based on the grades received during the report period of January to February, 1916. The distribution presented is typical of the situation in all subjects where grouping according to mental ability is practiced.

Digitized by Google

9. *It is expensive because of the increased number of teachers needed.*—The matter of expense is a relative factor, and if extra teachers were needed, the increased efficiency, the low percentage of failures, and the low percentage of elimination would serve to show that probably the net cost per unit was less than under the traditional plans of grouping. As a matter of fact, however, no increase in teachers has been found to be necessary for this plan in the Arlington High School, which has an enrolment of about 670 pupils. There are 25 regular teachers on the staff which makes a teacher-pupil ratio of 1 to 26. The program of studies is reasonably diversified, embracing the following subjects: English, 4 years; Latin, 4 years; French, 3 years; German, 3 years; algebra, 2 years; geometry (plane), 1 year; geometry (solid), 1 year; history (American, ancient, English, Roman, Greek, modern), each, 1 year; physics, 1 year; chemistry, 1 year; biology, 1 year; physical geography, 1 year; typewriting, 3 years; stenography, 3 years; commercial law, 1 year; commercial geography, 1 year; commercial arithmetic and penmanship, 1 year; economics, 1 year; bookkeeping, 2 years; drawing (freehand), 4 years; drawing (mechanical), 2 years; manual training, 4 years; music, 4 years; and physical training, 4 years. The distribution of pupils among the classes by subjects is as follows:

There are	8	subjects	in which	the classes	contain	13	to	19	pupils	
"	"	9	"	"	"	"	"	"	20 to 24	"
"	"	7	"	"	"	"	"	"	25 to 29	"
"	"	3	"	"	"	"	"	"	30 to 34	"
"	"	4	"	"	"	"	"	"	35 to 40	"

There is evidently no support for the contention that the classes are demanding the services of extra teachers or that they are too small in size to be economical; further, there seems to be nothing inherent in the Arlington plan that would increase either the net or the gross cost of teaching or administration.

10. *It is impossible to develop the program completely because of conflicts.*—It would be a difficult matter for anyone to say what is or what is not possible with a high-school program. Those who have had experience with them realize how intricate and yet how elastic they may be. Mr. Fred C. Mitchell, during the sixth year

Digitized by Google

the plan was in operation while he was principal of the Arlington High School, was able to place all the pupils in the groups where they belonged in all subjects operating under his plan, except in 29 instances. As there were 580 pupils in the school at that time, and only 29 of them were not in their proper groups, it would seem that the plan was in full operation with the exception of 5 per cent. My experience leads me to believe that this percentage of conflicts could be lowered but little in any system of selection. This small number of pupils not in their proper groups was provided for in such groups as their programs would permit, the teacher giving them some extra individual attention. Since September, 1915, all the changes required were made but about 16 per cent. This large difference is accounted for by the moving of the school into a new building, an unexpected increase in the enrolment, the introduction of two new courses requiring double periods, a change in the principalship, and the fact that the program had to be made out by one who was unfamiliar with the pupils. When the program for the next year is made out, much data will be available that will make it possible to prepare a more elastic program.

Under the head of the program difficulties comes the following contingency which must be provided for by special arrangement. In second-year German there may be 50 pupils, enough for three groups. When these pupils come to third-year German the following year, enough may have dropped out to leave about 36 or 40 pupils, still enough for two groups or possibly three. When they come to fourth-year German in the next year there may be but 24 to 28 in the class, enough for one large group, but too few to be divided into two or three groups, especially when 20 of them may belong to the first group. It is then impossible to apply the segregated grouping-system absolutely, and the pupils must be handled as one class of two groups, giving the better group more to do in proportion to the less efficient. A resourceful teacher will be able to meet such a situation and carry out the purpose of the plan successfully. This variation of the plan is in operation in three classes in Arlington.

When the plan of grouping pupils according to ability is first put into operation in a school that has used another system of

Digitized by Google

grouping, the program difficulties are colossal, and I am prepared to say that there is little prospect of getting more than 70 to 80 per cent of the pupils into the divisions where they belong. Under any plan of grouping it is difficult enough to avoid conflicts and keep the classes of nearly uniform size; when you add to the difficulties already existing the additional ones experienced in making it necessary to put pupils in certain groups, the difficulties are greatly increased. I am not prepared to admit that after the plan has been in use for two or three years the program cannot be worked out, though I am certain it will have to be compromised for a time until some of the fundamental difficulties have been met and solved, which can be done only by actually putting it into operation as far as is possible.

11. *Teachers cannot differentiate the work to meet the requirements of the several groups.*—This criticism is not supported either by my experience or by that of Mr. Mitchell. The aim of the teacher is always to carry the group along as fast as it can go. The amount and quality of the work is determined by the group and the teacher. Groups rated as equal are certain to differ more or less, and no two teachers will handle the same groups with the same method. It is impossible to plan the course of study within such narrow limits as to prescribe what shall be accomplished by each group. The best that can be done is to set the minimum for passing, and say that the first groups will go as far beyond it as they are able and the others must at least complete it in order to earn promotion, the difference in the groups being indicated by the difference in methods required to bring them up to the standard, the slowest groups working in classes of smaller numbers.

Any teacher who is qualified at all to teach in a secondary school should be able to determine the caliber of the group he is teaching and govern his methods accordingly. Under any system of grouping there will be a difference in the quality of the groups. The law of chance will sometimes put a large majority of bright or dull pupils in one group. Every teacher of experience knows to how great an extent classes differ and how they have changed the character of the instruction and the government of the classes to meet the difference. In the Arlington plan this difference in groups is

Digitized by Google

in part controlled, and more than usual attention is given to the matter of the method of instruction for the various groups.

CONCLUSIONS

1. There is no more danger of overreaching on the part of pupils in the Arlington plan than in any other.

2. The danger of stagnation in the lowest groups is not inherent in the plan.

3. Dull pupils are not deprived of the contact with keener minds, but find the contact more stimulating under the Arlington plan, as there is less difference between the brightest and dullest of a group than there would be in a chance distribution.

4. The transfers of pupils during the school year are a source of disturbance to the school, but the advantages to be gained justify the inconvenience.

5. There is no tendency to discouragement on the part of pupils transferred to lower groups that is serious or permanent.

6. Pupils in lower groups are not inclined to underestimate themselves.

7. There is no evidence that it tends to establish a "caste" system among the pupils.

8. The groups are not so homogeneous that leaders are not developed. On the contrary, there is much competition for leadership, the chances of leadership are now more widely distributed, and the leaders have no chance of becoming arrogant, because there is so little difference between them and their classmates.

9. As the plan has operated in Arlington, there is no increase of expense due to a demand for extra teachers.

10. It is not impossible to put the plan on a working basis because of program conflicts, though it is difficult the first year or two. Some conflicts are inevitable, as in any program. The larger the school, however, the less the difficulty. Any part of the plan in operation is a gain over the *laissez faire* method. It is best put into operation by beginning with certain subjects, one or two at a time; e.g., mathematics and modern languages.

Digitized by Google

11. There is a problem in the differentiation necessary to meet the demands of the different groups. Teachers of the most efficient kind are necessary for the success of the Arlington plan.

12. The plan does act as a stimulus to the pupils, resulting in more intensive work than under another plan.

13. The homogeneity of the group results in a great saving of lost motion in the teaching, most, or all, of the instruction being within the capacities of the pupils of the group. It also tends to remove the temptation to concentrate the recitation among the brightest pupils in a class.

14. Fewer failures are the result of the Arlington plan.

15. The percentage of elimination is reduced by the Arlington plan.

16. Pupils improve at a more rapid rate under the Arlington plan.

17. The opportunities for discovering special abilities of pupils are increased.

18. The Arlington plan tends to bring parents into closer touch with the administrative office of the school.

19. The initiative of pupils, especially in the lowest groups, is increased.

20. No matter how homogeneous as to ability we make a group of secondary-school pupils, there will be enough variation within the group to meet all the demands claimed for group instruction. The more homogeneous we are able to make the groups, the greater is the efficiency possible in the instruction. As far as these factors go the Arlington plan is commendable. Its chief weakness lies in its mechanical difficulties, and this is a matter of degree. A complete program for every pupil with the plan working in every subject is, as far as I have been able to observe, an impossibility.

21. The extent to which this plan can be developed in any school will depend upon the size of the school, the pupil-teacher ratio, the variety of subjects offered, the number of classrooms, the length of time the plan has been in use, the ingenuity of the maker of the daily program, and the co-operation of the teachers.

Digitized by Google

EDUCATIONAL NEWS AND EDITORIAL COMMENT

The Chicago Dinner

Former students and graduates of the University of Chicago who expect to attend the meeting of the Department of Superintendence in Kansas City in February are reminded of the annual dinner which is held at this meeting. The dinner will be given at the Hotel Muehlebach on the evening of Tuesday, February 27, at six o'clock. The price will be $1.50 per plate. Tickets can be secured in advance by writing to Dean W. S. Gray at the School of Education, or tickets will be supplied at the time of the dinner to all who have signified by Tuesday morning their intention of being present.

Editorial Announcement

The field of secondary education is expanding. No one who is interested in the problems of high-school education can escape contact with the work of the upper grades. Furthermore, the methods of scientific study of school problems recognize no sharp division between lower schools and higher schools. The high-school teacher is driven accordingly to take into account all the scientific studies made by workers in the elementary field. Indeed, so much more rapid has been the progress of standardization and measurement in elementary subjects than in high-school subjects that those who would perfect scientific tests are offered better examples in the elementary field than they can find in the secondary field.

This abstract introduction is the preface to the editorial announcement that the *School Review* has entered into a closer affiliation than ever before with the *Elementary School Journal*. The closer union will not carry the *School Review* out of its own proper field, which is the discussion of high-school problems, but the *Review* will aim to co-ordinate its work more fully with that of the other journal.

The combination is undertaken with a view, first, to insuring a more complete review of the literature of education. There will be in both journals more space devoted to summaries and reviews. It is hoped

Digitized by Google

that no significant material will escape adequate notice. In addition to the usual reviews, articles will be published from time to time summarizing the writings in particular departments.

Secondly, by uniting the forces of the two journals the news notes and editorial comments will be made to supplement each other. The *Review* will continue to give first place to news regarding the high school. It will come out, as before, on the first of the month. The *Elementary School Journal* will come out on the fifteenth of the month and will carry on the same general line of comment on educational movements, stressing, however, the doings of elementary schools.

Thirdly, the journals unite for the purpose of supporting certain monographs or longer publications which are too bulky for the journals themselves.

It was originally planned that these changes should be accompanied by a substantial increase in the number of pages published in each issue of the journals. The *Elementary School Journal* has indeed been brought up to the size of the *Review*, but the untimely increase in the cost of publication has prevented the *Review* from enlarging at once.

It is the hope and confident expectation of the editors that they can very shortly expand, in spite of the cost of paper. Every subscriber added to the list makes it possible to enlarge these publications. The *Review* will be enlarged as fast and as far as its resources permit. The *Review* exists for one sole purpose, namely, to promote the better organization and conduct of schools. Its editors have no compunctions whatsoever in asking those who know the *Review* to support it with contributions of articles, news items, and communications, and with that form of promotion which is most effective—a word to those who have not yet subscribed.

In the meantime, subscribers to the *Review* are invited to look into the announcement of combinations with the other publications of the School of Education of the University of Chicago, made on the second cover page, and to read the announcement of the new Monographs, which appears opposite the last page of reading-matter of this issue.

Vocational Education Association of the Middle West

The Third Annual Convention of the Vocational Education Association of the Middle West will be held at the Auditorium Hotel, Chicago, on January 18, 19, and 20, 1917. The preliminary program gives promise of a meeting of unusual interest and profit. Previous conventions

Digitized by Google

have proved that this organization aims to provide speakers with expert knowledge of the subject on which they talk. Purveyors of platitudes rarely appear on its program. Some of the topics are: vocational legislation as exemplified in the National Child Labor law, the Smith-Hughes bill, and the proposed bill for Vocational Education in Illinois; trade agreements; industrial surveys; vocational education as a fundamental in national preparedness; the views of organized labor; work for women; agricultural education; corporation schools; the training of teachers. Among the speakers already engaged are: Professor Frank M. Leavitt, of the University of Chicago; Arthur Dean, director of agricultural and industrial education, New York state; C. A. Prosser, director of the Dunwoody Industrial Institute, Minneapolis; Frederick W. Roman, professor of economics, Syracuse University; Dr. David Snedden, ex-commissioner of education, Massachusetts; Matthew Woll, chairman of the educational committee of the Illinois Federation of Labor; John D. Shoop, superintendent of schools, Chicago; Florence M. Marshall, principal of the Manhattan Trade School for Girls; Matthew P. Adams, superintendent of the Mooseheart Industrial Institute; Dr. L. D. Harvey, director of Stout Institute; Charles H. Winslow, director of the Indiana Vocational Survey; F. D. Crawshaw, professor of manual training, University of Wisconsin, Louis F. Post, assistant secretary in the Department of Labor; David E. Shanahan, ex-speaker of the Illinois House of Representatives; Royal Meeker, statistician of the Department of Labor; W. C. Bagley, dean of the School of Education, University of Illinois. In all probability Senator Albert B. Cummins who aided greatly in the passage of the National Child Labor law, will address the convention.

A final program of this convention may be had by applying to A. G. Bauersfeld, Secretary, 1225 Division Street, Chicago.

The Religious Education Association Convention

"Religious Education and the Coming World Order" is to be the theme of the Fourteenth Annual Convention of the Religious Education Association which will be held at Boston, February 27–March 1, 1917. The theme will be developed in addresses at popular evening sessions in Symphony Hall and other meeting-places and will be studied in its relations to the colleges, to churches and Sunday schools, to the family, to public schools, and to other social agencies, in special meetings held in the afternoons. Several commissions have been studying specific

Digitized by Google

problems in moral and religious education during the past year, and these commissions will report at the convention. Sessions will be open to the public. Programs may be obtained by addressing the Religious Education Association, Chicago, Illinois.

The Passing of Latin as a Required Study

The omission of Latin from the requirements for admission to Goucher College, Baltimore, is a most welcome indication that the colleges for women, which have come to be regarded as the stronghold of conservatism, are coming to recognize the democratic influences which underly the present tendencies in education. The significance of this radical step will be better understood when we recall that Goucher is one of the six colleges for women included by the Bureau of Education among the fifty-nine colleges and universities of first rank in the United States. This college will, in time to come, be regarded as a leader among women's colleges in the intelligent adaptation of its work to the needs of the time.

Of similar import is the action of Columbia University in abolishing all other baccalaureate degrees and giving only the degree of Bachelor of Arts. Hereafter, according to the annual report of President Butler, neither Latin nor Greek will be required for this degree, which will be awarded to any student who shall have satisfactorily completed a course of liberal study chosen in accordance with the general regulations established by the faculty.

University Conferences for Teachers

The annual conferences for teachers held at various universities are becoming each year more significant, as regards both the numbers in attendance and the character of the programs carried out. The University of Illinois Conference on November 23, 24, and 25 had an attendance of over 1,500. The program contained three general sessions and twenty-eight departmental sessions besides a dinner for principals and superintendents. The general sessions were devoted to a discussion of the standardization of high schools and the place of vocational education in a democracy. The program of the administrative section included discussion of the following topics: the junior high school, progress made and results obtained; the township high school; the professional reading of the high-school principal; the place of industrial education in the

Digitized by Google

high school. Several of the sections have permanent organizations and secure through committees continuity of work in their respective fields which has resulted in the publication of valuable reports. The English section has been for several years organized as the Illinois Association of Teachers of English, which publishes a series of bulletins at regular intervals.

The Conference on Supervision at the University of Iowa is unique. Its attendance is confined to city and county superintendents, high-school and grade-school principals, boards of education, and other supervisors. The third annual session of this conference on December 7, 8, and 9 had an attendance of 250. There were seven general sessions and two round-table discussions for each of the following groups: grade principals, high-school principals, city superintendents, and county superintendents. These round tables gave opportunity for discussion of the material presented at the general sessions in an unusually intimate and effective manner. In addition to the members of the Department of Education of the University, the following had places on the program of the conference: Mabel Carney, state supervisor of normal training high schools, Minnesota; Leonard P. Ayers, of the Russell Sage Foundation; F. J. Kelly, dean of the College of Education, Kansas; Superintendent Charles E. Chadsey, Detroit; Professor George C. Strayer, Teachers College, Columbia; Principal J. Stanley Brown, Joliet, Illinois; Principal Franklin W. Johnson, University High School, Chicago.

The Danford Law in Ohio

Under the heading "A Disgrace to the Profession," the *Ohio Teacher* contains the following vigorous editorial: "The operations of the Danford law are so plainly iniquitous that it can hardly find a defender anywhere. It could not be otherwise. The strange thing about it is that such a measure could be enacted."

The Danford law was passed by the last session of the General Assembly and is not a part of the code passed in 1913 on certification of teachers. It provides that a person who has never had any high-school education may be granted a certificate to teach one year. Such teacher is not required to have any normal training. After such teacher has taught one year the state would require him to have at least one year of high-school education and also the same amount of normal training that is required of experienced teachers. In other words, the great state of Ohio says that an eighteen-year-old boy who has had neither normal

Digitized by Google

training nor high-school training may be given charge of thirty or forty children and practice upon them for one year, but after the damage of malpractice has been done, the state says to him he is not sufficiently equipped to teach a second year until he has acquired further academic professional training.

This teacher with limited equipment competes on the market with teachers who have spent four years in high school and two years in normal school. *Each may be employed at the same salary.* If the normal-college graduate demands more than the minimum salary, some boards would prefer to employ the cheaper teacher.

The whole measure is a deliberate slap at professional training and at professional training schools. The standard set up by this law would satisfy the demands of the public a quarter of a century ago but not now. Ohio has been made the butt of ridicule by other states through the operations of this measure. It should be repealed at the very first opportunity.

The Educational Opportunity of Chicago

A few weeks ago Chicago and the country at large were promised another bitter fight between "administration" and "anti-administration" aldermen. The report was abroad that the Thompson faction was prepared to fight to the death the recent recommendations of the Council committee which has been investigating school control. Happily, as we go to press, opposition to the proposed school innovations does not seem to be developing much strength. Indeed, it seems quite likely that Chicago will submit to the legislature a request for a thorough reorganization of school control.

Alderman Buck's committee proposes that the mayor's power of appointing board members be transferred to the electorate; in other words, that so far as possible school administration be taken out of politics. Of course, no one believes that such a consummation can ever be actually attained, especially in a city of over two millions. The proposal contemplates the election of school-board members for Chicago on the same plan used for electing the trustees for the state university. It is to be regretted that the names of candidates for any such positions have to appear on party tickets.

Who are the members of Alderman Buck's committee, and what have they investigated?

They are a committee of the Common Council, a subcommittee on schools, under chairman Robert M. Buck, of the Thirty-third Ward, who

Digitized by Google

for nearly a year have been investigating the causes and the effects of the so-called Loeb rules of the Chicago School Board. The first important "Loeb rule" compelled Chicago teachers to give up membership in a labor union called a "teachers' federation." The second expelled nearly one hundred teachers who had been identified with federation activities. To be sure, some of these teachers had been ranked inefficient, but most of those expelled had been active in the federation and had been ranked good to excellent.

The *School Review* asserts that the objectionable feature of this Loeb rule is generally overlooked. It is not the injustice to certain good teachers, although that is bad enough. The chief objectionable feature is not the throwing of several thousand positions each year into jeopardy, at the whims of factions in a political school board; these objections are bad enough. But back of them and other objections lies the essence of the matter: the appointment and removal of teachers is essentially an administrative duty, which ought to be lodged, not in a school board, but in a competent, fair-minded, and courageous city superintendent. The Loeb rules, then, made possible, yes, almost inevitable, under the present system, are the subjects of investigation of Mr. Buck's committee. With unerring logic the committee has seen beneath the rules to fundamental causes, namely, *a large school board, appointed, shot through with politics, exercising both legislative and executive functions, controlling both general policies and administrative details.*

What are the recommendations of the committee? After outlining a long list of findings the committee submitted the following recommendations to be submitted to the Council:

> That the City Council adopt as its policy the constructive program hereinafter set forth and seek to unite the forces of the city who are patriotically, loyally, and unselfishly interested in the welfare of the greatest of our institutions—the public school—in a campaign to obtain the recommended legislation at Springfield; to induce the Board of Education to enact an administrative code such as is hereinafter recommended and which it can now do under its present powers without waiting for new legislation; and in a city-wide effort to educate the voters of the city to an awakened understanding of the progress that has been made in the science of education, while Chicago stood by and marked time, and to train them in efficiency in government of the school system that molds our future citizens and makes them American or not as it is efficient or inefficient.
>
> That the legislature be requested to amend at this session the school law governing cities of more than 100,000 population, so that it shall provide as follows:

Digitized by Google

The Board of Education shall consist of seven members elected at large.

The term of office of members of the Board of Education shall be six years.

Each member shall receive a salary of $1,500 a year.

The members of the Board of Education shall be elected at the regular city election each even-numbered year on a non-partisan ballot. At the regular city primary election the same practice shall prevail, the names appearing on the primary ballot by petition, the same ballot being used by the voters of all parties. If, at the primary election, any candidate obtain a majority of all the votes cast, he shall be declared elected. The names of twice as many as fail to obtain a majority shall be placed upon the ticket at the election in the order of the number of votes received at the primary, beginning with the one receiving the greatest number. The names shall be rotated upon the ballots by wards or precincts, both at the primary and at the election, the top name in one division being dropped to the bottom in the next. Women may vote for members of the Board of Education and are eligible to be elected to membership. Vacancies may be filled by the Board until the next regular city election, when they shall be filled by the voters.

Among the powers of the Board of Education shall be these:

To appoint an attorney and a comptroller who shall be directly responsible to the Board in the discharge of its legislative, inspectorial, and custodian functions and who shall not be under the control of the superintendent.

To appoint disinterested experts from time to time to report directly to the Board concerning the efficiency of the schools and the employees of the Board.

To execute a contract with the general superintendent of schools for not to exceed four years; such contract to contain provision for cancellation for cause.

To submit questions of educational policy to the people by referendum, either by passing ordinances contingent upon approval by referendum or by submitting questions of public policy.

The report directs that the legislative action permit the passage of an ordinance to govern the educational system, which shall define the functions, powers, and duties of the general superintendent of schools, his assistants, teachers, and other employees.

Let friends and opponents of the proposals read carefully this first paragraph. Let them be sure that their motives reach the length of that civic appeal. Let the battle be joined on the merits of the proposals, not on the desire to retain political power. The superiority of a small, unpartisan board is perhaps not unquestioned; the wisdom of a $1,500 salary is perhaps doubtful; the mode of election might be improved. Let the fight turn upon these issues. The administration

Digitized by Google

of Mayor Thompson has another large opportunity to make its followers fall into line, this time for educational progress; to crush the implication that anti-administration aldermen stand for good schools, while administration aldermen stand primarily for good politics; the administration has an opportunity to help thrash out an improved system of school control, based on some modification of Alderman Buck's recommendations; has an opportunity to take to Springfield a request from a united Chicago for school improvement. In short, just now, if we have an administration big enough to stop playing politics on a non-political matter and to substitute disinterested citizenship, Chicago may hope to see largely disappear the constant bickerings and jealousies, and waste, and unrest, that have played havoc with our school system for ten years.

The Council committee has indeed seen that the dismissal of teachers under the Loeb rule was merely an indication, a symptom, of a disease whose cause lies in the confusing of legislative and executive functions in a political school board. The committee does not forget, however, the symptom. With the same keenness of educational perception that characterizes most of its recommendations, the committee proposes to give to teachers a reasonable security of position. The committee would make a position in the city schools no sinecure job to be held indefinitely; permanency is to depend on continued and increasing efficiency. The recommendations provide that:

> Teachers shall be appointed from year to year for the probationary period of three years, after which they shall be removed only for cause following a full hearing, or for inefficiency or neglect of duty after notice of unsatisfactory service and opportunity to improve their work.
>
> On the charge of inefficiency or neglect of duty, after notice and opportunity to improve, the decision of the Board shall not be subject to review by the courts; provided, however, that such decision shall be based upon the written, detailed recommendation of the general superintendent of schools and upon the teacher's answer, which recommendation shall be filed simultaneously with the Board and with the teacher against whom the charge is made, at least thirty days before the decision by the Board; and provided, further, that the teacher shall have opportunity to answer in writing and shall have the right to cause publication of the recommendation and answer within the said thirty days.

THE CRUX OF THE PROPOSAL

The very heart of the proposals lies in a careful definition of the duties of the city superintendent. He is to become what he is not now

Digitized by Google

in Chicago, an executive officer with practically unrestricted power in his sphere. He shall initiate courses of study, choose textbooks, determine supplies and equipment, appoint, discipline, and dismiss all teachers and all employees of the school system not under civil service, etc. As the *School Review* has repeatedly pointed out, the city superintendent ought to assume administrative functions, just as the superintendent of a business concern assumes his responsibilities. His relation to the school board should be like the relation of a superintendent of a business concern to the board of directors. The latter may initiate new business policies; usually, however, their duties lie in approving and modifying policies outheld to them by their superintendent. So in the Chicago school situation Mr. Buck's committee proposes to have general educational policies determined by the school board, and even in some cases by the city council (and here lies danger). But the purely administrative features of the schools are to be delegated to the superintendent. If he proves incompetent, the remedy is to find some other man who is competent.

Correlation between Reading Tests and General Ability

There is no phase of education that has undergone such complete change in method of procedure within the last ten years as has the science of education itself. Formerly teachers contented themselves by stating general truths arrived at from theoretical averages. Today no point is regarded as certain unless it has withstood every known test. The value of a test depends upon the accuracy with which it measures some specific ability and the extent to which it gives clearly uniform results under similar conditions. When one is measuring the lifting power of a machine or the strength of an acid the situation is simple enough, but when brain power is to be measured there is an added uncertainty that lends zest to the experiment.

The experimenter is never certain that his instrument will register just what he is trying to get, and he is never quite sure of identical conditions. An experiment conducted by Dr. King, of the State University of Iowa, in the spring of 1916 is an interesting case in point. Dr. Kelly, in response to an inquiry, stated that no correlation between the Kansas silent-reading tests and other subjects had yet been made, but that there was a general feeling among teachers that there was some correlation. Dr. King, with the hearty co-operation of high-school teachers, set about finding the relations. He reports his results as follows:

Digitized by Google

Some Findings Regarding the Kansas Silent-Reading Test as a Measure of Ability

In the Iowa City High School the following medians by sexes were found:

Grades	Girls	Boys
Ninth grade	21	24
Tenth grade	21	29.3
Eleventh grade	21.2	27.9
Twelfth grade	30.8	34.5

It appears from this test that boys do better than girls and that there is a slight correlation with grade, more noticeable in the case of boys. These grade medians are similar to those published on the score sheet accompanying these tests, viz.: ninth grade, 22.9; tenth grade, 25.8; eleventh grade, 26.0; twelfth grade, 28.8.

The average class marks of these students of the Iowa City High School were compared with their grades in this test as follows:

Students averaging E made a median grade of 42.0
Students averaging G made a median grade of 41.3
Students averaging M made a median grade of 25.0
Students averaging P made a median grade of 21.3
Students averaging F made a median grade of 14.0

It will be seen that there is a fairly good correlation with class standing as far as high-school students are concerned.

This same silent-reading test was given certain groups of university students with the following results: Fifty-nine Freshman engineers, after one semester's work in the College of Applied Science, made a median grade of 38.3. This test was unfortunately given after ten or more of the weakest students had been eliminated from the class as failures.

In the spring of 1916, 94 liberal-arts Juniors and Seniors, mostly women, were given the test. Their median grade was 34.8. Range, 16.4–53.6. Range of middle 50 per cent, 29.9–40.4. There was no University Junior or Senior who made a grade equal to the test high-school grade of 68 (made by the valedictorian of the class of 1916).

Various coefficients of co-ordination (Spearman-Foot rule formula) between the ranks of the university students in the Kansas silent-reading test and their ranks in certain other tests of ability were carefully computed:

Freshman Engineers (Spring of 1916)

Kansas silent-reading test and hard-opposites test.....R 0.18
Kansas silent-reading test and scholastic rank.....R 0.12
Hard opposites and scholastic rank.....R 0.42

Digitized by Google

It will be seen from the above that the results of the hard-opposites test are a much better measure of the sort of ability that is expressed in class ranks than is the Kansas silent-reading test.

In the case of the Junior and Senior liberal-arts students even more interesting results were obtained. These students were tested twice (reading test No. 1 and reading test No. 2) for efficiency in silent reading. The object of these tests was to determine the relative efficiency of slow and rapid readers. The method and findings of this investigation will soon appear in *School and Society*. It is sufficient to state here that the relation between speed of reading and comprehension of matter read was found by both tests to be inverse of negative.

These two reading tests furnished two series of ranks for these 94 students in efficiency in silent reading. Our first silent reading test ranks, when compared with the ranks in the Kansas test, yielded a Spearman coefficient of 0.12. Test No. 2 compared with the Kansas test yielded a Spearman coefficient of 0.17.

The relative class standings of these 94 students was carefully measured and, co-ordinated with the Kansas test, gave a Spearman coefficient of 0.04. On the other hand, reading quality by our test and hard opposites gave a Spearman coefficient of 0.29. Class ranks and hard-opposites ranks, R 0.31. The ranks of the reading tests 1 and 2 gave a coefficient R 0.25. Our reading tests with class ranks yielded 0.22 and 0.29, respectively. These coefficients of co-ordination may be transmitted into approximate coefficients of correlation by multiplying each by the factor 1.5.

It will be seen that the Kansas silent-reading test shows quite low correlations with other measures of ability in these students. In fact, our reading efficiency ranks and ranks in hard opposites are much better measures of ability.

In conclusion, the Kansas silent-reading test, while showing some relation to the ability of high-school students, does not seem to be a good measure of ability of university students. In our opinion, *it is not a test of reading at all*, but of ability to follow directions and to solve simple problems.

Directed Reading

For a long time, persons interested in education have felt that, considering the money and the energy expended, the returns, represented by a love of reading good books, have been very scant. The Wisconsin State Teachers' Association of 1915, in an attempt to meet the situation, formed an organization to be known as "The Wisconsin Teachers' and Young People's Reading Circle," whose business should be to put the right sort of reading into the hands of the inexperienced and to stimulate interest by acknowledging in some way the effort made.

Digitized by Google

The Reading Circle has just issued its 1916–17 list, made in conformity with the township library requirements. Under the plan suggested in the list, all pupils of school age beyond the second grade, whether in school or not, are to be given credit for reading. One year of prescribed reading entitles the reader to a diploma, and every year thereafter entitles him to a special seal, to be attached to the diploma. Teachers as well as pupils are encouraged to read. The books chosen for professional reading should prove particularly helpful to young teachers.

The timeliness of the Wisconsin plan is attested by the number of classified lists of reading which have been arranged by schools and libraries. *A Reading Course for Elementary Schools for the State of New York*, Bulletin for September 15, 1915, of the University of the State of New York, is a similar plan as far as the list and a plan for giving city or county credit for reading is concerned. The New York plan limits the fiction to one-half the books read. There are many other valuable lists. Among these are: *The American Library Association Annotated Lists for Boys and Girls*, 1915; *A List of Books Suited to a High School Library*, compiled by the University of Chicago High School; *United States Bureau of Education Bulletin* No. 35, 1913; *High School Reference Books*, issued by the Iowa State Department of Public Instruction; *The Report of the Committee on Rural School Libraries*, reprinted from the National Educational Association, July, 1914; and *Reading for Pleasure and Profit*, published by the Free Public Library of Newark, N.J. The last-named list is more literary than most of this type. It is "a list of certain books which young people find entertaining, being chiefly books which older readers enjoyed when they were young."

The plan deserves the hearty co-operation of the Wisconsin teachers. It should bring communities closer together and make for greater uniformity in instruction within the state.

Digitized by Google

BOOK REVIEWS

The Direct Method in Modern Languages. (Contributions to Methods and Didactics in Modern Languages.) By CARL A. KRAUSE, PH.D. New York: Scribner, 1916. Pp. 139. Cloth, $0.75.

This latest volume by Dr. Krause, fittingly dedicated to Dr. Max Walter, is a collection of ten addresses, articles, and bibliographies, nine of which have previously appeared in the *Educational Review* and *Monatshefte für deutsche Sprache und Pädagogik*. The book comprises the following chapters: (i) "The Teaching of Modern Languages in German Secondary Schools" (a report to Superintendent William H. Maxwell on the author's observations in Germany); (ii) "What Prominence Is to be Assigned to the Work in Speaking the Foreign Language?" (iii) discussion on "Present Conditions and the Direct Method"; (iv) "Some Remarks on the Regent's Examinations in German"; (v) "The Teaching of German by the Direct Method"; (vi) "The Trend of Modern Language Instruction in the United States"; (vii) "Suggestions for Teaching Walter-Krause's Beginners' German"; (viii) "Why the Direct Method for a Modern Language?" (ix and x) "Articles on Modern Language Methodology in America for 1912, 1913, and 1914," to bring down to date the bibliography of C. H. Haudschin in his *Teaching of Modern Languages in the United States* (Bulletin of the U.S. Bureau of Education, 1913, No. 3).

Most of the papers of this symposium were first read before educational associations. Their origin extends over the years 1908 to 1915. It is therefore natural to expect some repetitions of salient points. But this by no means detracts from the value of the book, which, in the words of a prominent modern-language man, is "a sane, explicit, and forceful exposition of the underlying principles of the direct method" and "a veritable compendium of hints and suggestions as to the method of procedure in the classroom."

The book emphasizes, among other things, the following important points: (1) the relatively large amount of time allotted to modern languages in German secondary schools (especially in *Oberrealschule*) and the marvelous results achieved; (2) the inadequacy of our entrance examinations, with special reference to the New York State Regents' Examinations in German; more prominence should be given to oral facility, and an opportunity for originality ought to be afforded; (3) the need of better-prepared teachers· respectable living salaries should be paid to induce better men to go into teaching; (4) speaking the foreign language not an end in itself, but as a necessary prerequisite to correct writing and intelligent reading and understanding; "Power to use is the measure of efficiency in modern languages";

Digitized by Google

(5) the combination of the objective and the psychological (Gouin) methods as best adapted to our older pupils; (6) the trend in modern-language instruction is toward the direct method; this is strongly borne out by the articles enumerated in the bibliographies; (7) the importance of acquiring a good pronunciation, a good working vocabulary, and a working grammar; (8) real reading ability as the aim of modern-language instruction; the facts should be truly representative of foreign life; (9) the work must be slow and thorough in the beginning; "Too hasty striving after the classics is an abomination."

In the state of New York a great deal of progress has been made, and Dr. Krause takes a cheerful outlook upon the future. He is very (perhaps too?) optimistic about the achievements of modern-language teaching. With better-prepared teachers the standards will undoubtedly be raised. But without a seriousness of purpose on the part of the student the best results cannot be obtained. Let us hope that the knowledge of the close correlation between good work in school and success in life will also furnish an incentive for better work in modern language.

In conclusion, the book ought to be in the hands of every progressive language-teacher.

WILLIAM F. LUEBKE

STATE UNIVERSITY OF IOWA

Educational Measurements. By DANIEL STARCH. New York: Macmillan, 1916.

A critical and impartial digest of the available literature on educational measurements is sorely needed. Interest in this movement is so spontaneous and widespread, and the development of new measuring devices so rapid, that the average reader of educational journals gets but a fragmentary idea of the field.

Educational Measurements, by Professor Starch, of the University of Wisconsin, is the first book, so far as I am aware, that has been written to meet this new demand.

The author explains in his introduction: "It is undoubtedly premature to write a book at this time on educational measurements, because most of the measurements, are in an experimental stage." However, Professor Starch makes an attempt and must be judged accordingly. The reader unfamiliar with the literature of this field, will welcome the volume. To those who have kept abreast of the developments in standard scales and tests in education, the book will probably prove both a surprise and a disappointment; a surprise because the author has overlooked so much of the material available that should be digested in such a book, and a disappointment because so many of the tests included are extremely amateurish, while others upon the same subjects of proved value are not even mentioned.

Digitized by Google

The second and third chapters deal with "Marks as Measurements of School Work," and are perhaps the best chapters in the book. However, the critical reader searches in vain for mention of the studies of Cattell, Cajori, Gray, Kelly, and others in the field. Unfortunately, the author gives the impression that his own work on marks is sufficient, and the reader who expects to find a critical and impartial digest is disappointed. The literature is not fully summarized.

Chap. iv covers the measurement of ability in reading. Forty pages are given to this subject, of which 27 are used in quoting texts. Whipple's vocabulary test and Gray's reading tests are not mentioned. In giving standard scores at the conclusion of this and other succeeding chapters no mention is made of the number of cases, although the author does not claim that the standards are final. The last chapters of the book deal with tests on high-school subjects. These are extremely superficial and far from being standardized. All in all, the author is to be commended mostly for organizing for the causual reader a possible course in educational measurements. It is to be hoped that he will revise and enlarge the book before it runs into a second edition.

E. E. LEWIS

PROFESSOR OF SECONDARY EDUCATION
COLLEGE OF EDUCATION
STATE UNIVERSITY OF IOWA

A Study of English and American Writers, Vol. III. A Laboratory Method. By J. SCOTT CLARK, with additions by JOHN PRICE ODELL. Chicago and New York: Row, Peterson & Co., 1916. 8vo, pp. xii+645.

The great obstacle with which this volume, as well as its predecessors, has to contend, is the first impression its contents make upon a stranger. Such a reader finds here a new and elaborate method of literary study, and both the newness and the elaborateness at first repel him. If, however, he is spurred on to a close examination of the method, or, better yet, if he has opportunity to use it in the classroom, he invariably comes to think very highly of it. There are two great faults, among others, that most young students find in present-day teaching of literature. They are not taught what to look for or how to read observingly, and they are not taught to discuss the style of a writer intelligently; indeed, too often the student finds his instructor's lectures on style most nebulous. Professor Clark's method eradicates both of these faults. His volume lists the distinctive mental qualities of each writer; the student in his reading is to note examples of these; in other words, is to observe with guidance the dominant tendencies of the author's mind. He is not, at this stage, to discover these tendencies; he is not to utter generalities about them: he is to list examples of them. With regard to style, the student will observe in

Digitized by Google

his reading ten specific matters of usage stylistically fundamental (see p. viii) and will list examples of them. It will be impossible for him to indulge in any of the conventional textbook generalities, meaningless to him and trite to the instructor. Some teachers who love the lavender nebulosities of criticism will think the method rigid and lacking in play for individuality. That is unfortunate. The method is definite and practical; it develops the student's powers of observation; it frees him from the usual abject dependence on the professional instructor. Some teachers who love the lavender nebulosities of criticism will think the method rigid and lacking in play for individuality. That is unfortunate. The method is definite and practical; it develops the student's powers of observation; it frees him from the usual abject dependence on the professional critic; and it inspires in him a love of meaningful statement. No defect can counterbalance these virtues; and they are not merely virtues—they are crying needs in the present-day study of literature. Many of us, it may be said, who find it impracticable for various reasons to adopt the method entire, find these three volumes of great service in suggesting individual class exercises.

This volume—the last—completes Professor Clark's survey of the major English and American writers, and with the other two volumes (Scribner, 1905, 1907) forms a valuable manual of English style. It is a matter of sad regret that the death of Professor Clark made the completion of his work fall to another. Professor Odell, however, has proved himself an able continuator. Because of his long and pleasant association with Professor Clark at Northwestern University it has been possible for him to give us the book substantially as Professor Clark would have wished. In a volume of this size, with its compact presentation of multitudinous detail, there is some inevitable looseness of statement. We are all fallible. But the details are here; and the accuracy is up to the worthy standards of the preceding volumes. Professor Odell consequently deserves both thanks and congratulation.

Teachers who have not become familiar with the methods of these volumes have missed valuable training.

GEORGE SHERBURN

UNIVERSITY OF CHICAGO

The Psychology of Drawing, with Special Reference to Laboratory Teaching. By FRED CARLETON AYER, Professor of education, University of Oregon, 1916. Baltimore: Warwick & York, Inc. Pp. 186.

Students and teachers of science will welcome this contribution, which is the author's doctor's thesis. It "represents the results of a study of drawing as a device in laboratory teaching which has included a survey of the existing literature of the psychology of drawing." The book is arranged as follows: Part I, "The Scope of the Problem"; Part II, "Survey of the Literature of Drawing"; Part III, "Experiments and Conclusions."

Digitized by Google

In Part I the author points out that "laboratory work has three aims: the observation of material, the making of records, and the retention of learning. It furthers these aims by three devices: representative drawing, description, and analytical drawing. Our general problem is to determine the character of the various interrelations of the factors which enter into laboratory procedure." The specific problem, however, is "the psychological analysis of laboratory drawing."

Four chapters are devoted to a survey of the literature of drawing. In Part II we find such subjects as: "The Methods of Research and Bibliographical Survey" (chap. ii), "Studies in the Relation of Drawing to Intellectual Development" (chap. iii), "Studies in the Analysis of the Drawing Product" (chap. iv), "Studies in the Analysis of the Drawing Act" (chap. v). A bibliography of 110 titles is given at the end of the book.

"Four groups of subjects (about fifty in each group) were carefully tested with unfamiliar objects as to their abilities in drawing, description, and diagraming." These tests and the results obtained are recorded in Part III.

The author has arrived at a number of interesting conclusions, and many excellent suggestions are made for the improvement of science teaching. We wish to mention one set of conclusions. By definition, "representative drawing is 'representative' which reproduces as accurately as possible the exact appearance of an object. The product is a visual imitation of the original."

The effect of representative drawing upon the student's retention of scientific knowledge is stated by the author in the following words: "It is a waste of time for the interests of scientific thinking to require students to spend extended periods of time at representative drawing. In fact, it is worse than a waste of time, for it encourages bad habits of analytical study which are opposed to interests of scientific thinking and constructive research. It is no wonder that so few of our picture-laden notebooks give evidence of a scientific grasp or initiative. The excessive use of representative drawing is a serious pedagogical formalism which produces copyists instead of scientists and which creates distaste instead of enthusiasm for science."

"The results of the various special tests show that representative drawings do not afford a measure of the pupil's progress or an adequate record of the work which he has accomplished."

As opposed to the above conclusions the author finds that: (*a*) "Description [by words] is a desirable record of the work of the pupil. It covers a wide range of observation and lacks only in the matter of the extra time required for the preparation of accurate and comprehensive statements and for the teacher to make critical inspection." (*b*) An analytical drawing, as the term is here used, consists of a diagrammatic presentation of the parts of an object and their position and relation to one another. To produce such a drawing the pupil must analyze the object and then present it in its entirety, including parts that may be seen in one view and parts that may not be seen in that single

Digitized by Google

view. It requires analysis and sustained mental effort to the end of the process of constructive presentation. "Analytical drawings are ideal records of work accomplished and should be used wherever adaptable to the laboratory exercise. They require but a minimum of time for execution, can be made without exceptional skill of hand, and may be readily inspected."

EARL R. GLENN

HARRISON TECHNICAL HIGH SCHOOL
CHICAGO

How Children Learn to Draw. By WALTER SARGENT and ELIZABETH E. MILLER. Boston: Ginn & Co., 1916. Pp. iii+264. $1.00.

Books on methods of teaching are often merely compilations of detailed devices presented in the form of dogmatic directions. Books on psychology, on the other hand, even educational psychology, have been content with laying down general principles concerning mental life. Too often these general principles are so remote from any application to the problems of the teacher that the authors of the books containing them would be hard put to it to show that they have any bearing on practice. Even when the principles are themselves applicable, the student is commonly left to make his own application.

The significant fact about this book on drawing is that it represents the union between the presentation of theory and of the related practice. In this way theory illuminates practice by showing why certain methods are pursued. Furthermore, practice not only illustrates theory, but, still more important, forms the basis of theory. For this reason the book may be said to have a genuinely experimental basis. The experiment was not conducted in a technical manner, but it had the advantage of being carried on in a constructive spirit. Its aim was to discover the modes of meeting the developing phases of the child's ability to draw by the appropriate form of training, as well as to determine what these developing phases are.

The conclusions which the authors have arrived at as to the child's drawing interests and ability at various ages accord in a general way with the results of certain previous technical investigations, as those of Barnes and Clark. For example, they agree that there is a transition point at about the ages of eight or nine, when the child comes to a keener recognition of the detailed appearance of objects, and hence perceives the inadequacy of his early crude drawings. But the former experiments offered no solution of the problem which this situation presents. The authors of this experiment have shown that, while the younger child's drawings are what may be described as symbolic, in that they represent types rather than detailed individual characteristics, they are not, by any means, insusceptible to the influence of training. Among the forms of training which have proved successful are several which are, in some measure, reactions against the extreme forms of the modern revolt against the older formalism. Such are the use of tracing, and the mastery of a few type

Digitized by Google

objects. In addition, the gathering of information about objects which are to be represented in drawing, and the study of pictures to see how certain effects are produced, are employed.

Mention can only be made, in addition, of the manner in which the problem of correlation is attacked. This is one of the most characteristic features of the course. In general, the solution is sought by looking to other branches, as history, geography, and nature-study, to furnish the interests and the subjects, and then by choosing from these subjects such projects as suit the child's capacity at various ages and form a progressive series in difficulty of technique. Illustrations of such projects for all the school grades are given in detail, and the course in use in the University Elementary School is described in full.

FRANK N. FREEMAN

UNIVERSITY OF CHICAGO

English Literature. By JULIAN ABERNETHY. New York: Charles E. Merrill Co. Pp. 583.

Almost every publisher of school texts offers a history of English literature; hence a new edition must have unusual features to recommend it.

The History of English Literature, published by the Charles E. Merrill Co; and written by Dr. Julian Abernethy, has two distinguishing characteristics. The author has allowed himself sufficient space to give the particulars of his story something like true proportion; for instance, he allows himself four chapters in which to describe the Elizabethan era, without feeling that he must consequently cut down a less important period into a mere catalogue of names; and the minor writers are kept remarkably clear, considering the brevity of the text. The final chapter, which discusses the chief literary tendencies of the present age movements, is perhaps the most unusual part of the book.

Bird Friends: A Complete Bird Book for Americans. By GILBERT H. TRAFTON. Boston: Houghton Mifflin Co.

Friends of the birds will welcome Gilbert H. Trafton's new book. Widespread interest in the economic as well as in the aesthetic value of the feathered inhabitants of our country has been aroused as the evils resulting from the reckless slaughter of many important species have become more and more evident. In this work the author has made a general survey of the whole subject in such a way that the situation may be understood by the public. The facts necessary to an intelligent knowledge of the subject are given in an entertaining way. By means of illustrations and carefully worked out tables the service of the birds in the destruction of insects and noxious weeds is effectively presented, and followed by a discussion of those birds which are

Digitized by Google

popularly classed as harmful. This topic is interesting and valuable, since a comparatively small amount of damage has so often created a prejudice which has led to indiscriminate slaughter of some species. Instead of the usual generalizations which are so unsatisfying to one who desires information, accurate data are used in presenting these subjects. A balance is struck as to just how our account with the birds stands. After his conclusive showing of the essential value of birds and their decreasing numbers, their need of protection from the encroachments of civilization becomes evident and appeals to the reader as a vital question. Not only has man himself been an enemy of these good friends, but he has introduced and cared for birds and animals which have been responsible for a large decrease in the bird population. All of this is presented in a way which is never wearisome, but convinces the reader and enlists his sympathies for these invaluable guardians of our forests, orchards, and crops, so that he is readily interested in the many practicable methods of attracting and caring for them which are given in the concluding chapters. Audubon societies and teachers who are trying to create an interest in, and a love for, these delightful and most useful neighbors of ours will find that this book covers the field in a highly serviceable manner; whatever the phase of the study on which information is sought, whether observation of the habits, identification, economic value, or protection, the student and the general reader will find facts and suggestions of value. For those who desire to make a detailed study of any of these topics a bibliography is provided.

The definite and clear discussion of this important question, in a handsome yet serviceable binding, with good paper, large, clear type, and many fine illustrations, make up a very desirable volume for both public and private libraries.

ETHEL GOLDEN

IOWA CITY, IOWA

The Promise of American Life. By JAMES CLOYD BOWMAN. Boston: D. C. Heath & Co., 1916. Pp. 303.

The Promise of Country Life, is the attractive title of a book of descriptions and narrations to be used as models in an agricultural course in English.

The reader who is primarily interested in agricultural students can but be jealous when he reads the table of contents and the author's preface dedicating the work especially to this group of students. In his effort to appeal to farm boys, Mr. Bowman has happily broadened his appeal to American boys and girls. The selections, without being erudite, are full of the call of the woods and the by-lanes and the out-of-doors.

The work has been carefully planned. The author says in his preface: "The first group of selections has to do with the type of individual who is most at home in the country. The second treats of the pleasures which may be found in solitude; the third shows how various types of men have found

Digitized by Google

enjoyment in a rural environment; the fourth contrasts life in the city with life in the country; still another describes man's mastery over the crops of the fields and domestic animals. One story depicts the unstunted loyalty of man's best out-of-door friend, the dog; one story pitilessly portrays the meager life of those who are too impoverished of soul to enjoy what the country has to give; finally, a group of stories discuss the various sociological and economic problems of farm life."

Since, however, the selections have been chosen from such well-known writers as John Burroughs, Hamlin Garland, James Lane Allen, Cora Harris, Guy de Maupassant, and Lyoff N. Tolstoi, the order in which the selections are placed is of slight importance.

The introduction includes an analysis of method in description, simple narrative without plot, and short story, which most high-school teachers will find very suggestive. Although the text is evidently intended for college use, the selections are not too difficult for advanced high-school students. In schools where library facilities are limited, the book will furnish the teacher of American literature quite a range of modern American writers.

Experimental Education, Laboratory Manual, and Typical Results. By FRANK N. FREEMAN, PH.D., assistant professor of educational psychology in the University of Chicago. Boston: Houghton Mifflin Co., 1916. Pp. viii+220.

As a result of the increased application of experimental methods to the study of education, the content of courses for teachers and students has been largely changed in recent years. Textbooks and professional reading present a continually growing amount of material of a concrete sort, much of which has been gleaned from experimental research. Consequently, it is no longer possible for the student of education, even apart from the necessity for training in methods of research, to understand thoroughly and grasp the significance of the materials of study without some knowledge of the methods by means of which this material has been gathered.

The student of education has until recently been obliged for the most part to get this knowledge from courses in experimental psychology not adapted for his special purpose. Hence the demand for laboratory courses which are designed primarily for the needs and purposes of the student of education. Such courses have been severely handicapped by a dearth of manuals and a lack of standardized laboratory exercises. The publication of Freeman's book on experimental education, which is at once a laboratory manual and descriptive of the results of the experiments outlined, comes at a time when much need is felt by teachers of the subject for just such a book.

A brief introductory chapter gives with admirable clearness an account of the significance of experimentation and general instructions as to methods of

Digitized by Google

treatment of data. There follow directions for performing experiments pertaining to sixteen different subjects, beginning with an analysis of the various types of the learning process. Typical exercises are presented illustrating (1) the development of a motor co-ordination, (2) the development of adequate perception, (3) the formation of associations between perceptual or ideational elements, and (4) the analysis of a situation.

The next section of the book deals with experiments bearing directly on school subjects—writing, reading, and number work. Finally, there appears a series of tests of the visual and auditory senses and of the higher mental functions. The instructions for each experiment include, not only descriptions of methods and materials, but also directions as to treatment of results and a discussion of typical results and their significance. The descriptions of methods of treating results, including graphic representation and mathematical treatment and tabulation of data, are especially valuable. Topics for further study are suggested, and also a list of questions on the wider applications of the experiment. Each chapter is supplied with a list of references bearing on the topic concerned. An appendix gives figures and materials for use with the various experiments, and cuts appear throughout the book illustrating such apparatus as is necessary.

The work is characterized throughout by clean-cut descriptions, and the author's insight into the practical problems of education, united with the analytic judgment of the trained psychologist. Some disappointment may be felt at the somewhat limited range of laboratory exercises presented, but the selection of possible experiments has been carefully made and only such exercises are given as have been clearly found fruitful in the author's experience. Furthermore, the author's suggestion of possible extensions of the various experiments will be found to be fruitful sources of additional investigations for those who desire a larger amount of laboratory work. Teachers of the subject will therefore be grateful to the author for a workable and useful manual.

E. H. CAMERON

YALE UNIVERSITY

Digitized by Google

BOOK-NOTES

(Detailed discussions of some of the following books will appear later.)

ABERNETHY, J. W. *English Literature.* New York: Charles E. Merrill Co., 1916. Pp. 585.

Clean print, interesting pictures, good literary map.

A Million a Year: a Five Year School Building Program, including Discussion of Some Fundamental Educational Policies. City of Minneapolis, 1916. Pp. 90.

ANGUS, F. R. *Fundamentals of French.* New York: Henry Holt & Co., 1916. Pp. 279.

A combination of the direct and grammar methods.

BALCH, E. *Amateur Circus Life.* New York: Macmillan, 1916. Pp. 190. $1.50.

A unique and very interesting presentation of exercises in physical training.

BERNHARDT, WILHELM (Editor). *Immensee.* Boston: D. C. Heath & Co., 1916. Pp. 136. $0.35.

BERTOLETTE, D. F. K. *Motives in Education.* Boston: Gorham Press, 1916. Pp. 63. $0.75.

The book contains three essays. The first of these, "Motives in Education," is an ethical treatise of the chief causes which may influence any person to study; the second, "French Huguenots in Early Florida," is a historical essay; and the third, "Trees as a Means of Beautifying Our Cities," is a discussion on beautifying our cities with trees.

BOWMAN, JAMES CLOYD. *The Promise of American Life.* Boston: D. C. Heath & Co., 1916. Pp. 303.

CLARY, S. WILLARD (Editor). *Höher als die Kirche.* Boston: D. C. Heath & Co., 1916. Pp. 129. $0.35.

The new edition has added "Grammatische Übungen" and has made some changes in the "Fragen" and "English Exercises."

EVANS, GEORGE W., and MARST, J. A. *First Year Mathematics.* New York: Charles E. Merrill Co., 1916. Pp. 253.

Feeding the World. Issued by the Board of Education, Minneapolis, "Occupational Series," Bulletin No. 6.

A reprint of chap. ii from the report of the *Minneapolis Vocational Education, Bulletin No. 21,* National Society for the Promotion of Industrial Education.

Financing the Minneapolis Public Schools: Sources of Revenue; Expenditures; Comparison of Principal Items of Expense with Corresponding Items in Twenty-four Other Cities. City of Minneapolis, 1916. Pp. 36.

Digitized by Google

Five Hundred Practical Questions on Economics for Use in Secondary Schools. Compiled by a special committee of the New England History Teachers' Association. Boston: D. C. Heath & Co., 1916. Pp. 58.

FRYE. *Complete Geography.* Mississippi edition. New York: Ginn & Co.

GUERBER, H. A. *Märchen und Erzählungen.* Boston: D. C. Heath & Co., 1916. Pp. 212. $0.65.

The text has been revised by Dr. Guerber. A revised vocabulary and direct-method exercises have been added by Professor W. R. Myers.

Higher Educational Institutions of the State of Iowa. Department of the Interior, Bureau of Education, Bulletin, 1916, No. 19.

Improvement of Rural Schools by Means of Consolidation. State of New Jersey, Department of Public Instruction, July, 1916.

KITSON, H. D. *How to Use Your Mind.* Philadelphia: J. B. Lippincott & Co., 1916. Pp. 215.

A book which may be used as a college text. Very helpful to grade and high-school teachers interested in supervised study.

Know about Library. New York: E. P. Dutton.

A very attractive set of books offering just the things children want to know about. Many a rainy afternoon might be amusingly and profitably spent with these bright little books.

KNOWLES, A. *Oral English.* Boston: D. C. Heath & Co., 1916. Pp. 351.

LEWIS, ORLANDO F. (Editor). *Germelshausen.* Boston: D. C. Heath & Co., 1916. Pp. 113. $0.35.

The vocabulary has been compiled in this new edition. More elementary notes, and "Fragen" and "Grammatische Übungen" have also been added.

LONG, E., and BRENKE, W. C. *Plane Geometry.* New York: Century Co., 1916. Pp. 273. $1.00.

Geometry is correlated with algebra. The practical side of geometry is emphasized. The book is furnished with a pocket which holds a carefully constructed rule.

Mortality Statistics, 1914. Department of Commerce, Bureau of the Census, 1916.

REANEY, MABEL J. *The British Journal of Psychology, Monograph Supplement* 4, "The Psychology of the Organized Group Games." Cambridge University Press.

Scholarly work. Very complete bibliography.

RICE, RICHARD A. *Stevenson: How to Know Him.* Indianapolis: Bobbs-Merrill Co., 1916. Pp. 395.

SHAW, W. C. *The Brief-Maker's Note Book for Argumentation and Debate.* Boston: Ginn & Co., 1916.

The book is unique. Its use would facilitate logical brief-making in the classroom and serve as a guide in the debating society.

Sixteenth Annual Report of the Director of Education, January 1, 1915–December 31, 1915. Manila: Bureau of Education, 1916. Pp. 185.

SNEATH, E. H., HODGES, G., and TUCEDY, H. H. *The Way of the Stars and the Way of the King's Palace.*

The books are a part of the eighth volume of the "King's Highway Series," designed for the moral guidance of grade-school children. The selections show careful regard for child interest and literary quality.

Digitized by Google

THE SCHOOL REVIEW
A JOURNAL OF SECONDARY EDUCATION

VOLUME XXV FEBRUARY 1917 NUMBER 2

A PHASE OF COMPULSORY EDUCATION

ABRAHAM DEUTSCH
Bronx, New York

To those interested in the welfare of children, the announcement of the amendment to the New York state compulsory education law, to go into effect on February 1, 1917, will be welcome news. The amended law, in brief, will permit children to secure employment certificates under the following conditions: (*a*) they must be at least fourteen years of age and have completed the work of the elementary school; (*b*) if they have completed only the work of the first six years, they must be at least fifteen years of age; (*c*) any child who is sixteen years of age is permitted to leave school and go to work irrespective of the grade he is in. The New York Child Labor Committee may well be proud of its work, since it was instrumental in securing the passage of this amendment, which now puts our state in the foremost rank of those states that are providing for the welfare of their children through excellent compulsory education provisions.

There has been a gradual raising of these standards, both as to age and as to educational attainments which children have had to reach before the law permitted them to take their places in the world of business. Where formerly it was possible for a child to go to work after acquiring a knowledge of the simplest rudiments

Digitized by Google

of an academic training, most children must now, under ordinary conditions, have received a fairly thorough school training before being permitted to leave school.

It is indeed fortunate for us that we have passed the stage where it was possible for an individual to consider his own welfare alone and where he lived and acted for the satisfaction of his own wants and desires without regard for others. The weak and ignorant were exploited by the stronger and more intelligent. The history of civilization teaches us that the safety and progress of our society depends on the welfare of the individual, who must contribute to its well-being when his turn comes. If, therefore, we would have a stable and progressive society, we must give much care to those who will later form part of it. Our complex life demands a far longer preparation for one who is to take a part in it than was formerly required, and most of this preparation is now obtained in the school. This, in short, is the theory underlying compulsory education, and it is one which no right-minded person can fail to accept. So important does our own city think attendance in school to be, that there has been established a "Bureau of Compulsory Education, School Census, and Child Welfare," commonly known as the "Bureau of Attendance," and one of its chief duties is to "cause to attend upon school instruction" every child who is legally required to attend school.

It is often stated that good compulsory education and child labor laws should have no exceptions, that what is for the benefit of one must undoubtedly be of benefit to all. For the vast majority this is true, but, as sometimes happens with man-made laws, there are a few—a very few in our case—for whom a setting aside of the requirements of the law would be exceedingly wise both for their own welfare and for that of the community. There is a type of boy in our city elementary schools who is a "misfit" in our educational system. He is a big, strapping boy who is in a grade more or less below that to which his age and physical development would ordinarily entitle him. We are going to consider such a boy, who is past fourteen years of age, who is not legally permitted to go to work owing to his failure to have reached a certain grade, who is unfitted by nature to continue the ordinary course of study in the

Digitized by Google

elementary school, and for whom as yet there has been made little or no special provision adapted to his different nature and temperament. For him the law is compulsory in that the time requirement for remaining in school seems to be the most important factor, with less emphasis on his educational attainments. His mere presence in school satisfies the requirements of the law, while for the vast majority it would thus be their success in advancing from grade to grade. The time element in the one case corresponds to the scholarship element in the other. Thus the chief weakness of a compulsory education law appears to be that it practically requires mere attendance on the part of our type of child, as will be more fully shown later.

Unfortunately this type of boy is sometimes "boldly and persistently disobedient. Some of these are more or less rowdyish and insolent, but hardly vicious; others approach the criminal in character—sometimes attempting to start a panic in a fire drill, by shouting and running; sometimes using foul language to the teacher or throwing a knife or book at her . . . . and frequently defying both classroom teacher and principal outright. . . . ." Others of this type are those who are "extremely disobedient, disorderly, and defiant, and who must be kept within the school; there is practically no other provision for them. They have little respect for authority, little regard for the rights of others, and little fear beyond that of bodily hurt." Such are the findings of Professor McMurry, as stated in his report as a member of the "School Inquiry Committee-Board of Estimate and Apportionment." This survey of the schools of New York City was carried on from 1911 to 1913.

Again, still others are reported as "ungovernable," "unmanageable," "incorrigible," "truant," "unwilling and refusing to study," etc. Saddest of all, some of these children find themselves in the children's court, charged with juvenile delinquency, due sometimes directly or indirectly to the lack of mutual adjustment of school and child to each other. The writer fervently pleads with the reader not to be unduly influenced by these characterizations of our boy, nor to form a hasty judgment as to the best solution for this matter on the basis of these facts alone, but to give this sad condition and serious problem earnest and careful consideration.

Digitized by Google

The following statistics will, to a great extent, serve to show more explicitly the nature and extent of our problem, though in a more or less general way only, since they do not bear exactly on our subject, but still are the only ones available at the present time.

1. The first set is an extract from Table XII of the *Seventeenth Annual Report of the City Superintendent of Schools of New York.*

TABLE XII
[*Extract*]

AGE-GRADE DISTRIBUTION OF PUPILS IN THE ELEMENTARY SCHOOLS OF THE ENTIRE CITY, FEBRUARY 5, 1915

Grade	Age-Grade Standard	14–14½	14½–15	15–15½	15½–16
5A	10½–11½	628	786	552	308
5B	11 –12	997	1,129	807	529
6A	11½–12½	1,498	1,719	1,218	710
6B	12 –13	2,107	2,247	1,692	945

Here are hundreds of children who are over-age, many of whom are far behind in their studies owing to various reasons, such as physical defects, illness, foreign parentage, etc. There are also those who are in good physical condition and who began school at the proper age, but who, because of mental characteristics and capacities different from those which most children possess, fail to react to the requirements of school life as is ordinarily expected.

2. The following are extracts of Tables XV, XX, XXIII, and XXVI of the *First Annual Report of the Director of Attendance.*

TABLE XV
[*Extract*]

SHOWING DISTRIBUTION BY CAUSES OF ABSENCE AND SEX OF 130,513 CASES INVESTIGATED BY ATTENDANCE OFFICERS

Cause of Absence	Total	Boys	Girls
Truant	29,520	26,895	2,626
Employed illegally while enrolled in elementary school	2,318	1,173	1,145
Not found	9,104	5,118	3,986

A comment of the report on Table XV is to the effect that there is a "comparatively small number of children employed illegally . . . . although this number would undoubtedly be increased if

Digitized by Google

all the children reported as 'not found' . . . . could be located." It is assumed, of course, that our boy is often a truant, owing in many cases to his dislike for school. Again, for this reason, he will often go to work even though prohibited by law, as will be shown by an actual case later.

An honest statement of the foregoing facts requires the quoting of extracts from Tables XX, XXIII, and XXVI.

TABLE XX

[*Extract*]

SHOWING COMPLETE DISTRIBUTION BY CAUSE AND RESULT OF INVESTIGATION OF 130,513 CASES INVESTIGATED BY ATTENDANCE OFFICERS

Cause of Absence	Total	Returned to School	Placed in School	Legally Employed	Not Found
Truant	29,520	24,174	5,230	61	55
Employed—no employment certificate while enrolled in elementary school	2,318	1,162	89	1,047	20
Not found	9,104	.....	.....	.....	9,104

TABLE XXIII

[*Extract*]

SHOWING DISTRIBUTION OF HEARINGS BY COMPLAINT

Truancy	4071
Illegally employed	214

TABLE XXVI

[*Extract*]

SHOWING DISTRIBUTION OF CHILDREN FOR WHOM HEARINGS WERE CALLED BEFORE DIVISION SUPERVISORS, BY AGE, SEX, COMPLAINT

Age		Truancy	Illegally Employed
14	Boys	748	41
	Girls	112	11
15	Boys	801	57
	Girls	129	41
16	Boys	206	26
	Girls	57	7

3. In the *Annual Report of the Children's Court of the City of New York* for the year ending December 31, 1915, the records of the

Digitized by Google

Probation Bureau show that this department found it necessary to investigate the cases of 4,440 boys brought before the Court. Of this number there were 1,937 boys between the ages of fourteen and sixteen. Out of the total number, it was found necessary after this investigation to commit 399 and to place 2,617 on probation and 879 under supervision, while 201 were discharged and in 344 cases sentence was suspended. It is therefore impossible to state exactly just how many of the 1,937 boys mentioned above as being between fourteen and sixteen would come within our particular class, but suffice it to say that it is not a question of numbers, and that, no matter how many or how few, for their own welfare the peculiar problem which their condition presents deserves our particular attention, and it is the duty of society to offer them every possible means for their betterment.

Our problem really originates in the school and sometimes spreads to the Children's Court for further consideration. Our boy is unable to adjust himself to school conditions and is unsuited to the class in which he finds himself, because of his older age, more developed physical condition, different nature, and the lack of of special provision for him. Various other factors combine with these and produce a boy whose unsocial behavior brings him to our attention in the manner described above.

In the following paragraphs are given some of the more important and possible methods of discipline, correction, and reformation.

1. The use of corporal punishment under certain restrictions is advocated by Professor McMurry in the report referred to above. This method is prohibited in the schools of New York City. No one can deny its value, however, for a particular offense where such immediate and severe action is necessary, but he who believes that such a method can correct a chronic and deep-seated condition is old-fashioned and ignorant of the principles of modern educational practice. There are times when corporal punishment is undoubtedly necessary, but as a general solution for our problem it would be wrong and would fail absolutely. We don't any longer, for one thing, try to "lick" knowledge into the heads of unwilling and incapable children.

Digitized by Google

2. Where the conduct of a boy is such that it requires more serious consideration, and where ordinary methods of correction and discipline have failed, the principal of a school has the power to bring this matter to the attention of the district superintendent, who holds a hearing, but whose jurisdiction is limited to the transmission of his findings to the city superintendent of schools for further action. In the report quoted above Professor McMurry describes the difficulties in the way of bringing such children to trial, the reluctance and unwillingness on the part of a principal to resort to such a method of procedure, the humiliation of the complainants who must make their accusations to another before whom defendant and complainant appear on the same level, and states that finally, in most cases, the verdict is simply the transfer of the boy to another school, which "is not at all what many of these children most need." This method seems likely to fall into disuse, for, as the Bureau of Attendance becomes better organized, it will necessarily take over this function of holding hearings.

3. In the chapter on "Probationary Schools and Truant Schools" of his *Seventeenth Annual Report*, City Superintendent of Schools Maxwell makes the following statements:

> In my *Eleventh Annual Report*, I recommended "that Probationary Schools, similar to P.S. 120—two in Manhattan, two in Brooklyn, one in the Bronx, and one in Queens—be established as soon as buildings can be obtained in which to house them. Institutions such as the Parental School will always be needed. It is much cheaper however, where it is possible, to reform a boy in a day school than to board him and lodge him (p. 206). . . . .
>
> The primary purpose of these schools is to reform delinquent pupils. Delinquent children are not necessarily mentally defective. They may be children who are temperamentally different from the normal child; or those who show signs of criminal tendencies; or truants who, without criminal intent, may be led into dangerous company and bad practices.
>
> The special care and treatment which these children need cannot be given to them by the regular class teachers, who must work under the strain of large classes. Furthermore, these delinquent children should not be permitted to interfere with the class work of the normal pupils. Children who are admitted to these schools have been given every opportunity in at least one elementary school and usually in two schools; they are not transferred to the probationary school until they have shown clearly that they cannot get along in the regular classes. Both their own welfare and the progress of normal pupils demand

Digitized by Google

that the delinquent children be grouped in special classes or schools, in charge of teachers who are specially trained to care for them. . . . .

The course of study in probationary schools should include academic subjects, Physical Training, Industrial or Vocational Training, and Moral Training. . . . .

This is an excellent method, by which, no doubt, many of our boys will be taught to respond in the right way. Especially is such a school of decided value for the younger children where delinquency is not of long standing. Yet even here it is a question whether or not the legal minimum-age limits for leaving would not bring up our problem again in a different form. There is the possibility of the time element of the law being the emphasized factor of its "compulsoriness." However, owing to the high cost of such schools, there is an insufficient number of them, and in these days of economy and retrenchment in making appropriations such added expense will not meet with much favor. Present conditions cannot, therefore, encourage us much in this direction, and so we must seek elsewhere for a more practical solution.

4. Under the compulsory education law it is a duty of the Bureau of Attendance—

to order any child between 7 and 16 years of age, who is an habitual truant from instruction upon which he is lawfully required to attend or who is unsubordinate or disorderly during attendance, to attend a truant school, for a period not exceeding two years, and in no case after the child is 16 years of age, provided after reasonable notice to such child and the persons in parental relation to such child, and an opportunity for them to be heard, the consent in writing of the persons in parental relation to such child shall have been given. The authority to commit such a child to a truant school and to parole him therefrom resides in the Director of Attendance.

Some of the "policies" of this bureau as "interpreting" its duties under the law are: (*a*) "to provide for the apprehension, arraignment, study, treatment, and rehabilitation of the persistently irregular or habitually truant and delinquent child; this contemplates commitment if necessary"; (*b*) "to prosecute in the courts those children who are habitually truant or irregular in attendance or disorderly while in attendance, and who have been adjudged beyond the control of the parents"; (*c*) to co-operate

Digitized by Google

fully with the Children's Court for the control of juvenile delinquency."

This bureau has set forth for itself an excellent program of work to carry out its duties under the requirements of the law. It makes, when necessary, a thorough investigation of all the factors which influence the life of a child who is summoned for a hearing for violation of the compulsory education law, and is ready to do all in its power to remedy matters, although exceedingly handicapped owing to lack of "sufficient funds to carry out its plans properly." There were only 4 hearings for incorrigibility for the school year ending July 31, 1915. This strangely small number is undoubtedly accounted for by the fact that many of our type of boy were also truants and as such probably formed a good part of the 4,071 truants summoned for hearings.

Yet there comes a time in dealing with our boy, after we have made all necessary investigations, when we feel that under existing conditions our efforts must fail, and that if the provisions of the law were temporarily set aside to permit us to do for the boy what our judgment impels us to do for his best interests, we might then hope for success in our handling of this problem. It is again emphasized that we must not limit our consideration of the case to the particular acts of delinquency on the part of the boy, but we must go beneath the surface and seek the condition which is the primary cause. Our boy is unfitted by nature to continue in the regular school, and there is very little actual provision for him otherwise. Definite and prompt action is needed. The laws of educational psychology require us to plan school method and content to conform to the characteristics of the mental functioning of the child at various periods. The school, not the child, must do most of the accommodating in this respect. No one denies the right of the school to claim the time of the child for the purpose of training him, but the time so spent must be profitable for the child. If it is not, it is for the school to relinquish such claim.

The following case histories will serve to illustrate our problem and show what should and can be done to solve it.

1. W.A. is a big boy, fifteen years old, and is only in Grade VI A. When he was thirteen, he was brought to the Children's Court for

Digitized by Google

having stayed away from home. A year later he was arrested again for having entered a cellar and stolen some nuts. During the past school term he again stayed away from school and home on two different occasions for three and four days respectively, the last time being implicated with two other boys in having stolen jewels from the parents of one of them. The school record of W. shows that his conduct has been poor and that he was "left-back" several times. The principal of this school at one time wrote to his probation officer that he "was associating with undesirable companions, smoking cigarettes, shooting craps, and was bold and defiant in his attitude." He was "left-back" this term because of his lack of effort and unwillingness to do the required work. He refused to attend "summer school" to make this up. The home conditions are satisfactory. Here is a big, healthy, lazy fellow who is actually accomplishing nothing by being in school. The law requires that boy to attend until he is sixteen years old, owing to his low grade. Are we to stand blindly by and let him practically idle his time away for another year until he will be permitted to go to work, when nothing really would be lost if he were allowed to do so now?

2. Here is another boy who illegally solved his problem in a manner which must command our approval and admiration. When L. K. was fourteen, he secured a transfer to another school at the beginning of the fall term, when he moved to another district. Nothing more was heard of him for about 100 school days. He "disappeared" when he should have been in school. Previous to this he showed intense dislike for school and his record proved this. This boy was therefore a truant within the meaning of the compulsory education law and was violating its provisions. When he was found later, he was taken to the Children's Court, which placed him on probation. It was learned that he had secured employment in a large department store and earned $7 a week.

While on probation his record was excellent, and he put forth his best efforts in Grade VII A to which he was returned. The only complaint, however, was that this very big boy would resent being "spoken to" and would "answer back." The law requires him to attend at least 130 days during the year previous to his

Digitized by Google

request to be permitted to work, and up to this June he has attended about 70 days and so will be forced to return this fall to complete the time requirement.

The family is in poor circumstances. L. is an excellent son at home and for two years he has been working after school to help in the support of his family. There is a stepfather who is a peddler, another boy of sixteen who works, and six little children to be supported on these meager earnings. A sociologist would argue that to prevent the family from becoming a recipient of charitable aid, the boy should be permitted to work as he has been doing and not be forced to attend school.

On one occasion L. made the following complaint: "It is a struggle for me to be in school because it is disagreeable for a boy of my size to associate with little fellows, and anyway I want to be independent of the support of my father." This summer he secured employment as a salesman in a men's clothing-shop, although illegally, and earned $10 per week and as much as $5 more for overtime. In an application for another position he gave his age as twenty-two, and his manly appearance would cause no doubt to arise about this in the mind of a stranger, although he is only fifteen years of age. His magnetic personality quickly wins the confidence and respect of those with whom he comes in contact. To his probation officer he stated that he would not return to school under any circumstances, even if he had to leave the city and go elsewhere.

If this "boy" who is already a young man does not return to school as the law requires him to do to be eligible for an employment certificate, it will be possible to commit him to a truant school. Here is a young man who is already showing himself to be a good citizen and who gives promise of proving a welcome asset to the community. Will it not be a crime against his nature for us blindly to obey the law and violently to force him to attend school? Is there any doubt at all as to which is the proper solution for this problem—a boy who absolutely abhors school and is "making good" elsewhere?

3. H. F. was fifteen when he first came to the Children's Court charged with incorrigibility, being disorderly at home and also

Digitized by Google

remaining away from there. He was always troublesome, demanded money which the mother was unable to give him, refused to attend "summer school" to make up classes, and was a disturbing element in the home. In school he was a truant. The principal stated that the boy would not benefit by being in school and that, owing to his age, size, and temperament, he was a detriment to the class. Because of his inability to progress there, it was suggested that he be transferred to a vocational school, where he was later denied admission on the grounds of "ineligibility and unfitness." A short time after this the mother was taken to the hospital, and the home, being neglected, became dirty and badly kept. H. came home only to eat and sleep. He became a truant again, and "hung out" in a barber-shop where he spent his time loafing about and smoking cigarettes. He was examined by an expert on mental disorders of children, who declared that the boy was not fit for his class in school and ought to be permitted to go to work, which permission he was legally able to get some months later.

When he did secure employment, his probation record showed that he became a differently behaved person and acted in the way a good son should. Steady work undoubtedly effected a reformation in this boy's character.

4. B. W. was thirteen and a half when he was arrested for stealing a bicycle. His early probation record shows poor behavior and failure to meet his probation officer several times when requested. He was twice remanded for a week by the court for poor reports in school. He was a truant, stayed out late at night, and his attitude was one of indifference and bravado at first. His school record shows that "he had been demoted for inattention and was making no effort." A year later a teacher reported as follows: "I am the only teacher who kept him an entire term in her class. He spent 4 terms in VI AA—not only kept him in the class but gave him an hour's coaching every day to make up for lost time and make it possible for him to be promoted to VII A. Before witness gave him a chance to begin all over with understanding that he would do as rest of class. He refused." The boy failed to get along with this teacher and continued his truancy. At home, however, his conduct had changed

Digitized by Google

for the better. The probation officer visited the assistant principal of the school, and in the report stated that "this official was unsympathetic and was of opinion that the boy should be placed under restraint." Later the boy was transferred to another school, where he finally secured his working certificate when he was past fifteen, a long time after he might have received it with the same benefit to himself and the avoidance of useless trouble and waste of time. He worked hard when he secured employment and was ambitious, "showing a love for business which he never showed for school. He looks quite manly since employed and shows good spirit in his desire to do right." B. states that he is "past the foolish age" and is "going to keep straight," his excellent probation record for this period being sufficient proof of this desire being acted on.

The first case was cited to show where our remedy of allowing our type of boy to go to work in spite of the law would be necessary and proper. The second case was a clear illustration of the possible benefits that might come to a boy if this exception to the law were allowed. The third and fourth show the inevitable good results that come in the vast majority of such cases after these boys are permitted to go to work. Let it be understood, however, that this solution is not a cure-all. There will be several who will fail in this direction as they failed in school, and a few who may possibly end up in some institution or reformatory.

When dealing with delinquent boys, probation officers almost always advise them to go to work when possible, when experience in dealing with such boys suggests to these officers the need of such a method of reformation, which tends to produce a thinking and ambitious young man where there was formerly a thoughtless and indifferent boy. Work in the business world is a real training for these boys, develops latent powers, stabilizes character and actions, and makes them take an active part in their own reformation, which rarely fails to take place.

In summing up, we may argue that to make a legal exception of this type of boy cannot be objected to on the ground of lack of physical development. In this connection we may cite the interesting study that was conducted several years ago by

Digitized by Google

Dr. C. W. Crampton, director of physical training in our schools. He subjected 4,800 high-school boys to various tests, and the statistics given in Table I are part of his findings.

TABLE I

PHYSIOLOGICAL GROUPS

Age	Immature Percentage	Maturing Percentage	Mature Percentage
14 -14½.....	26	28	46
14½-15	16	24	60
15 -15½.....	9	20	71
15½-16	5	10	85

Furthermore, the provisions of the labor law will protect this type of boy from long hours, dangerous occupations, etc. By the time such a boy reaches the fifth or sixth year in his school work, he can read, write, spell, and perform operations in arithmetic of which ordinary business requirements demand a knowledge, besides other academic training which he might have acquired. Will the loss of this short extra training, ordinarily necessary to secure a working certificate and amounting to a year or two perhaps, be a really serious one? Many boys now leave school when they become sixteen, who do not get as far as the seventh year in their school work, or even the sixth or fifth. We would very much desire every child to receive as much academic training as possible, but as it was somewhere naïvely stated, "You can't put a five-dollar education into a five-cent head and some must be manual laborers." We must take a practical view of the whole matter. Moreover, what is to prevent such boys from attending night school as the law now requires all children to do who have not graduated from the elementary school or who are not yet sixteen? Let us further remember that the lack of a complete education does not preclude the possibility of success in business, as is very often proved in business.

Our boy is usually pubescent or post-pubescent. With pubescence there come vast changes in a child's whole life. His changing nature demands different methods of teaching, etc., from that which prepubescent children require. Dr. Bachmann in his report

Digitized by Google

on "Promotion, Non-promotion and Part-Time" in the *School Inquiry* referred to at the beginning of this discussion, states that "there is general agreement that children cannot be kept with profit under the régime of the elementary school much beyond the period of pubescence."

In his discussion on "Child Labor and Compulsory Education —The School Aspect" in the publication of the National Education Association for 1905, George H. Martin gives the following conclusive arguments:

> We cannot afford to lose sight of a certain profound psychological fact. There comes a time in the life of many boys and girls when the developing instinct of manhood and womanhood appeals to them with commanding force, and impels them to do what men and women are doing, namely, to work for wages instead of doing what children are doing, namely, going to school and playing.
>
> These cases need to be handled with the greatest care. To enact into such a law that such children shall remain children, when their whole nature is crying out for them to be men, is to work a hardship as great as to compel them to be men before their time. Compulsory schooling for them may be as cruel as premature labor is for others. Hundreds of boys and girls who have passed the age of 14 are getting more real development, a better education, in productive labor than they would get in any such school as they will be compelled to attend.

Who is to decide when it is for the best interests of our type of child to go to work? In our own city, the principal of the school could bring the attention of the Bureau of Attendance to such boys. This department, being organized and equipped to make all necessary examinations and investigations, should therefore be given this important power. Other cities could well copy this scheme. In the absence of any such provision, where a boy is on probation owing to his having been brought before a children's court, the power could lie with the judge on recommendation of the probation officer. Again, the principal of the school in consultation with the parents of the child and representatives of various child-welfare agencies could be given this power where no other provision is made for such a condition.

Digitized by Google

METHODS AND CONTENT OF COURSES IN HISTORY IN THE HIGH SCHOOLS OF THE UNITED STATES

HUGO H. GOLD
State University of Iowa

PART I. ADMINISTRATION OF THE CURRICULUM AND CONTENT OF COURSES IN HISTORY

INTRODUCTION

Extent and sources of data.—The present article is based upon a Master's thesis submitted by the writer to the University of Iowa in June, 1915. The material for Part I was obtained from an examination of 242 of the most recently published courses of study received from 236 cities distributed over 41 states as follows:

From 9 North Atlantic states: 81 cities
From 5 South Atlantic states: 17 cities
From 10 North Central states: 78 cities
From 8 South Central states: 28 cities
From 9 Western states: 32 cities

In addition to an examination of the published courses of study, the writer examined all the available textbooks used in high schools throughout the country, and lastly sent out a questionnaire to the teachers of history in order to get some data on methods of teaching. The data received from the questionnaire will be tabulated in Part II of this article.

The problem was to discover the extent to which the printed courses[1] of study reflected the reports of the various committees of the National Education Association and of the American His-

[1] In the following pages the term "printed courses of study" refers to the published pamphlets sent out by the various schools under the title *Courses of Study*.

The term "curriculum in history" has been used to designate the various kinds of history offered in a given high school, e.g., ancient history, mediaeval and modern history, etc.

The outlines of these specific fields of history will be referred to as "courses in history."

Digitized by Google

torical Association, and to find out something regarding the prevalent methods of instruction in history.

The printed courses of study were checked as the most convenient method of discovering the prevailing practice in the administration of the curriculum in history. Wherever topics were mentioned, these were tabulated in order to determine as far as possible what the framers of courses in history regard as the important topics for emphasis. The fact that a given topic was specifically mentioned in the courses of study was interpreted to mean that that topic was considered of greater importance than the innumerable other topics given in textbooks.

Criticisms.—It is recognized that the sources of the data for this study are not infallible. There is no absolute proof that the courses in history are invariably followed, but it is believed that this method of treatment will reveal general tendencies and be helpful to teachers, administrators, and supervisors as an index to practice.

The writer recognizes that the field is a broad one, and that this study is only a very limited treatment of a few general topics. It is hoped that the material contained herein may be suggestive and helpful in further investigations in the field of history in secondary schools.

I. ADMINISTRATION OF THE CURRICULUM IN HISTORY

Aim of high-school history.—Before checking up the printed courses of study, a thorough analysis of the reports of the committees of the National Education Association and of the American Historical Association relating to history in secondary schools was made by the writer. The various general aims of history, as stated in these reports, were assembled, and a comparison was made to discover whether or not the makers of courses of study restated the aims mentioned in the reports.

Table I shows the frequency with which aims in the teaching of history were stated in 126 courses of study.

Comparing the statements (Table I, p. 90) with the reports of the committees, it will be noted that in many instances the authors of courses in history were familiar with the reports of the

Digitized by Google

committees. In several instances the aim was quoted verbatim from the report of the Committee of Seven. Only 126 of the 242 printed courses examined specified an aim in the teaching of history. One predominant aim is purely disciplinary. The committees recognize that discipline is one of the functions of history.

TABLE I

Statement of Aim	Frequency
Knowledge of the development of civilization	42
To develop patriotism and intelligent citizenship	36
To acquire broad sympathies and culture	34
Knowledge of the development of nations	22
To acquire powers of interpretation and judgment	22
To acquire a store of useful facts and historical material	18
To see how our ancestors solved problems in order to help us in the solution of problems	15
To get such a picture of the past as will help us to understand modern life, current events, and present movements	13
An idea of the remoteness of oriental beginnings and of the length and reach of recorded history	11
To develop ideals, national and universal, such as character, initiative, foresight, courage, fortitude, efficiency, genius, etc.	9
To furnish a background for literature and general education	8
To furnish illustrative moral materials	7
A definite knowledge of the names, location, and chronological succession of the early oriental nations	6
To teach the pupils the use of books and how to extract substance from the printed page	6
To develop the memory and imagination	5
To gain power in the systematization of facts	4
Knowledge of the development of democracy	4
To satisfy a conventional demand	4

Scope of the curriculum in history.—Table II shows the kinds of history offered in 242 high schools or high-school systems and the frequency with which the various combinations occur.

The modal combination, it will be noted from this table, is ancient, mediaeval, and modern English and American history and civics, studied in the order named. This combination occurs nearly four times as frequently as the next most frequent combination and more frequently than all other combinations taken

Digitized by Google

together. This is in accordance with the recommendations of the Committee of Seven, the Committee of Five, and the Commission

TABLE II

Kinds of History	Frequency
Ancient, mediaeval and modern, English, American and civics	135
Ancient, mediaeval and modern, American and civics	36
Ancient, English, American and civics	27
Ancient, mediaeval and modern, English and American	21
Ancient, mediaeval and modern and American	8
Ancient, English and American	4
All others	11
	242

on Accredited Schools and Colleges of the North Central Association of Colleges and Secondary Schools.

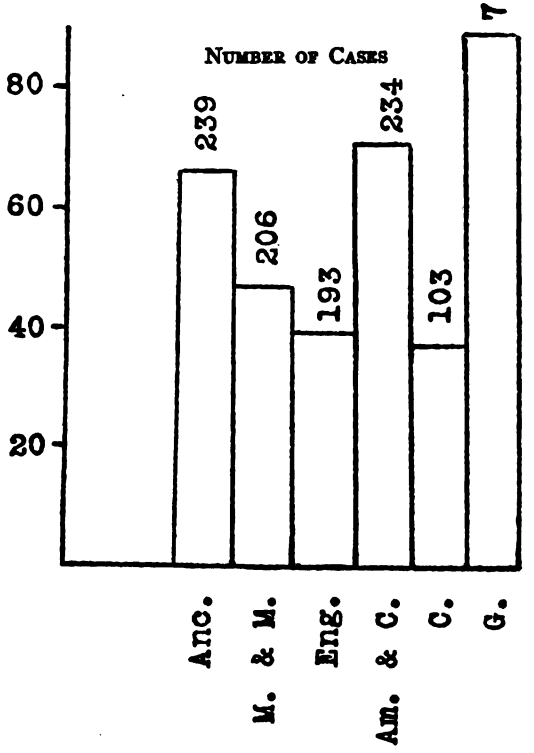


FIG. 1—Relative Frequency with Which the Various Courses in High-School History Are Required Courses.

G. = General history. Am. & C. = American history and Civics. Anc. = Ancient history. M. & M. = Mediaeval and Modern history. C = Civics as a separate course.

Figures at the left indicate percentages of the total number offering the various courses.

Digitized by Google

Ancient history is predominantly a first-year subject. There is a complaint that Freshmen are too immature for ancient history. The Committee of Five recommends that if the curriculum in history extends over a period of three years it is well to begin in the second year. Mediaeval and modern history is a second-year subject and, like ancient history, is one year in length. English history is predominantly a whole-year course offered in the third year.

In American history and civics nearly half of the schools are disregarding the recommendations of the committees. Both the Committee of Seven and the Committee of Five recommend that they be taught as a single subject, even though there be time for separate courses. The committees also recommend that colonial history should be taught in connection with English and modern European history and that in American history only a rapid survey of this period be made. The published courses show very little evidence that this recommendation is being observed.

Number of units of history offered.—Table III shows the amount of history offered in the high schools of 236 cities in the United

TABLE III

Half-Units	10	9	8	7	6	5	4	3	Cases
Group I*.....	1	0	19	0	4	1	1	0	26
Group II.....	0	2	32	4	15	1	0	0	54
Group III.....	2	4	60	15	25	1	3	1	111
Group IV.....	0	0	17	8	17	2	1	0	45
United States.....	3	6	128	27	61	5	5	1	236
Percentages:									
Group I.....	.04	.0	.73	.0	.15	.04	.04	.0	100
Group II.....	.0	.04	.59	.07	.28	.02	.0	.0	100
Group III.....	.02	.03	.54	.13	.23	.01	.03	.01	100
Group IV.....	.0	.0	.38	.18	.38	.04	.02	.0	100
United States...	.01	.02	.55	.11	.26	.02	.02	.01	100

*Group I = Cities of 100,000 population and over
Group II = Cities of 25,001–99,999 population
Group III = Cities of 5,001–25,000 population
Group IV = Cities of 5,000 population and less

States in terms of half-units. This table should be interpreted as follows: of the 26 cities in Group I, 1 city offers 10 half-units of history, none offers 9 half-units, 19 offer 8 half-units, etc. The term "unit" as here used is the meaning applied by the North

Digitized by Google

Central Association. The lower half of the table is the upper half reduced to percentages. From this table it appears that in 55 per cent of the cases 4 units of history is offered. One-fourth of the cities offer only 3. In the large cities the modal number is 4 units, while in the cities of 5,000 population and less there are two modal numbers of 3 units and 4 units respectively.

Fig. 2 is a graphical representation of the relative frequency of the various amounts of history offered in 236 cities in the United States estimated in half-units.

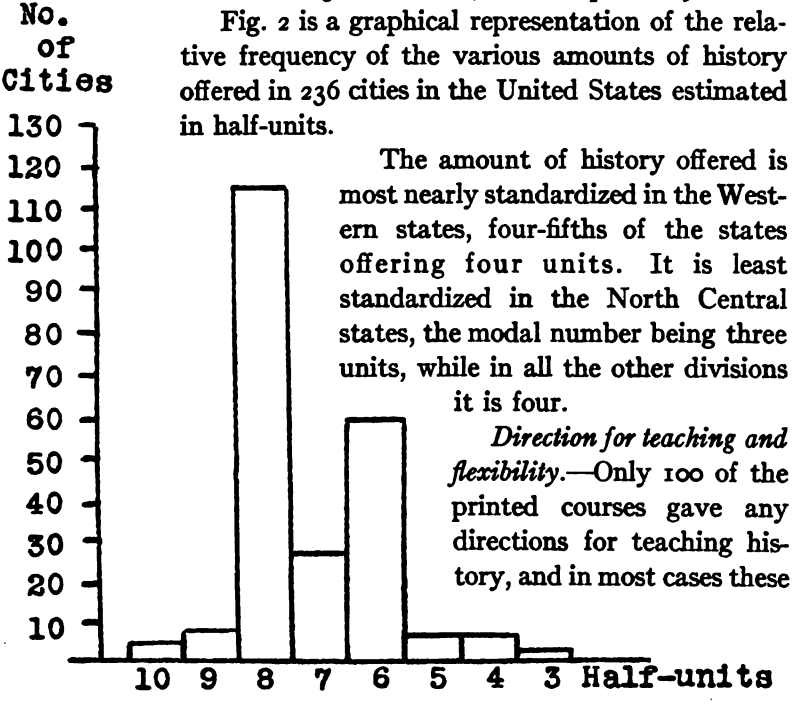


FIG. 2

The amount of history offered is most nearly standardized in the Western states, four-fifths of the states offering four units. It is least standardized in the North Central states, the modal number being three units, while in all the other divisions it is four.

Direction for teaching and flexibility.—Only 100 of the printed courses gave any directions for teaching history, and in most cases these were very general and very brief. Very few references were given as a guide for the teacher, and practically nothing was given as to the relative importance of the various topics mentioned. In only one case were the time allotments definitely specified. The practice seems to be to allow the teacher a great deal of latitude in the presentation of the work. In practically no case was there anything which might be called a syllabus on history. The general tendency seems to be to leave the methods of teaching, as well as the subject-matter, largely to the teaching-staff, and the topics

Digitized by Google

mentioned for emphasis are very limited in number, with few specifications as to the relative time spent on the various topics. Hence, it seems that there is considerable *opportunity* for flexible courses, but in many cases the textbook is followed so closely that from necessity the courses become very inflexible.

CONTENT OF COURSES IN HISTORY AS REVEALED BY THE PRINTED COURSES OF STUDY

a) *Ancient history.*—The course in ancient history, according to both textbooks and printed courses of study, includes oriental, Greek, and Roman history extending down to 800 A.D. This is in accordance with the reports of the Committee of Seven and the Committee of Five. This committee contends that ancient history must be made simpler and less abstract. Less attention should be paid to the history of institutions, and more time spent upon simple studies of art and habits of life. The committee says in substance that institutional details must give place to pictures and stories of the great deeds and achievements of antiquity.

b) *Oriental nations.*—Very few of the cities report definitely regarding the distribution of time among the three divisions of ancient history. According to the reports of the committees, the study of oriental nations should be completed in four or five weeks. Only six courses incorporate this recommendation. Thirty others, however, indicate "a brief study" of the oriental nations. China, India, and Persia do not receive half as much attention as Egypt, Judea, and the Mesopotamian countries. There is a marked tendency to eliminate China and India, three textbooks giving no space at all to these countries, and one textbook giving only one page or less. An examination of the textbooks gives evidence of disagreement among authors as to what is important. Often three times as much relative space is used by one author on a given topic as is used by another.

c) *Greek history.*—The topic most frequently mentioned for special emphasis in Greek history is "life and culture." This is rather vague and indefinite. Administrators and supervisors should be more specific as to what phases of life and culture should be emphasized. It is rather striking that so much emphasis is given

Digitized by Google

to wars and dramatic and heroic scenes. This is perhaps due to a prevalent idea that the high-school age is the time when the youth is interested in thrilling events, the drama and heroism. It is well to ask, How much should this interest be encouraged?

d) *Roman history.*—The most significant fact revealed in courses in Roman history was the prominent place given to "law, government, political life, and citizenship," these topics being mentioned in eighty-eight cases. Religious life stood second in the order of frequency. In Roman, as well as in Greek, history the emphasis on military life and wars is maintained. In all these respects practice does not agree with the recommendations of the committees, which specifically say that the course in ancient history should consist of familiar talks and lessons about things that pupils of fourteen can understand; that less emphasis should be placed upon wars (those which mean nothing being entirely omitted) and more attention paid to biography and studies of art.

e) *Mediaeval and modern history.*—In mediaeval and modern history the greatest purpose seems to be to give the pupils a conception of the political history of the principal European states. The topics emphasized in the order of frequency in the courses of study were wars, the church, and Christianity. The severest criticism from the standpoint of the Committee of Five to be passed upon mediaeval and modern history courses is the undue emphasis upon military and constitutional detail.

f) *Nineteenth- and twentieth-century history.*—Only twenty-four courses make any mention of nineteenth-century history. In four cases it was specified that the major emphasis of the course in mediaeval and modern history is placed upon the nineteenth-century period, in one case to the extent of a half-year. Ten of the history courses mentioning nineteenth-century history state that emphasis is placed upon the growth of political and social equality, colonial expansion, and the development of diplomatic relations and national pride and dignity. There is also a tendency to take note of the political conditions in the Orient, the awakening of China and Japan, and the conditions in Africa.

In twenty-one courses some stress is placed upon twentieth-century history by the study of current events. There seems to

Digitized by Google

be a lack of uniformity as to what should be emphasized in present-day history. The topics of most frequent occurrence are present political and social conditions in European countries and movements for international peace and arbitration. This is all very good if social conditions in European countries are closely related to conditions in our own country.

The writer is inclined to favor the practice of the four schools which place the major emphasis of the course in mediaeval and modern history upon the nineteenth-century period. This is in accordance with the recommendations of the Committee of Nine, which says: "High-school history should always be taught so as to function in a better understanding of modern institutions, current events, and present movements."

g) English history.—The three topics which stand out most prominently in English history are: (1) The English constitutional system, including the vast colonial empire, (2) industrial and economic development, and (3) wars, both civil and foreign. While the growth of democracy was specifically mentioned only twelve times, it is a reasonable conjecture that teachers do not unduly neglect this phase of the subject, but it is extremely doubtful whether they give the necessary emphasis to industrial and social evolution. In general, the courses in English history contain some evidence that one aim of the course is to acquire a background for the study of American history, but it is a question whether the background remains until the foreground is formed in the minds of the pupils.

h) American history and civics.—Table IV shows the frequency of topics in the different periods as mentioned in 234 courses in American history.

HISTORY AS A REQUIREMENT IN HIGH-SCHOOL STUDIES

In 168 of the published courses of study there was evidence of a differentiated curriculum, there being opportunity for students to pursue different groups of related studies. The writer listed each of these 168 schools separately, showing the names and number of the various groups of studies in each school, and the kinds and amount of history offered in each group. In all, 122 different names of "courses" were found, which were classified into two

Digitized by Google

TABLE IV

COLONIAL PERIOD

Topics	Frequency
Discovery, exploration, and colonization	16
European background of American history	16
Comparison of northern, middle, and southern colonies	14
Rival claims in America and inter-colonial wars	7
Character of the colonists	6
Brief study of this period	3
Causes for American ideal of government	2

CRITICAL PERIOD

Revolutionary War: causes and resulting problems	25
Formation of the Constitution	22
Confederation, or inter-colonial union	14
Constitutional and national development	13
Trouble with France and England	7

NATIONAL PERIOD

Commercial, industrial, and economic development	40
Political development: rise of parties and politics	29
Slavery states' rights, Civil War, and reconstruction	24
Current history, or current events	19
Local history (special emphasis)	12
Present position of the United States as a world-power	9
Tracing of causes and effects	8
Rise and growth of democracy	7
American biography	6
Spanish-American War and its results	6
Federalist supremacy and decline	4
War of 1812: struggle for neutral rights	3
Educational development	3
Monroe Doctrine	2

PERSISTENT PROBLEMS

Acquisition of new territory, expansion, imperialism	32
Tariff, its history and present status	18
Currency and banking	9
Westward movement and its effects	8
Civil service, and the spoils system	8
Internal improvement: waterways, railroads, transportation, conservation, reclamation, etc.	8
Trusts and their regulation	7
The race question	5
Army and navy problems	3
Economic and commercial problems (Panama Canal)	3
Labor unions and relations of labor and capital	3
Immigration	3
Development of ideals: political, social, and industrial	2
Equal suffrage	1
Peace movement	1
Disposal of public lands	1

Digitized by Google

general groups: (1) College preparatory courses, and (2) vocational courses. Then (1) was divided into language courses and general and special preparatory courses and (2) was divided into regular four-year vocational courses and vocational short courses.

It was found that by using this scheme of classification and combining all courses of a similar nature, all of the 122 could be arranged in 24 groups as follows: Commercial (137),[1] general or academic (99), scientific (87), classical (77), general vocational (55), home economics (49), normal (49), English (45), technical (43), Latin (40), modern language (34), manual training (34), industrial (29), agriculture (21), two-year commercial (18), fine arts (12), engineering (10), history special (10), two-year industrial (10), Latin-modern language (9), two-year home economics (6), one-year vocational (5), music (4), three-year commercial (3).

The object of this classification was to determine the kinds and amount of history required for the different classes of training.

In the general college-preparatory studies only one unit of history is the modal requirement, as also in the academic, scientific, technical, fine arts, and engineering groups. In the four latter groups this unit is most frequently American history, while in the former there is a slight preference for ancient history. In the classical and normal groups a requirement of two units is the prevailing number, ancient and American in the former, and American and one other unit in the latter.

Where a special history group is offered, four units is the modal requirement. In the language groups there was great variability in the amount of history required. In the English group four units are required, in the Latin group two units, consisting of ancient and American history, and in the modern language group one unit of American history. In practically all of the regular four-year vocational groups, one unit of American history is the prevailing requirement. There is a marked tendency to introduce industrial history into the list of studies preparing for general industrial pursuits. In vocational short courses the custom seems to be no history as an absolute requirement.

[1] Numbers in parentheses indicate the frequency of occurrence in the published courses of study of 168 high schools of the group of studies capable of being classified under these various headings.

Digitized by Google

SUMMARY AND CONCLUSIONS

The following are the main general conclusions deduced from Part I of this article:

I. *As to the administration of courses in history.*—

1. The aim of history is seldom stated, and when stated is often not clearly defined in the printed courses of study. In many cases the statement of aim reflects the reports of the committees.

2. The printed courses of study reflect the reports of the committees with respect to the kinds of history offered. More than half of the schools offer a four-year course consisting of ancient, mediaeval and modern, English, and American history and civics, studied in the order named.

3. More schools offer a course in ancient history than in any other, American history following as a close second.

4. Only a few schools continue to offer a course in general history. The recommendations of the committees have been followed quite generally in abolishing this course. Wherever offered it is usually a required course.

5. With the exception of general history, the most frequently required course is American history and civics, ancient history following as a close second.

6. The modal number of units of history offered in cities above 5,000 population is four, and in cities of 5,000 population and less there are two modal numbers of three and four units, respectively.

7. With respect to length, courses in history are most nearly standardized in the Western states, and least standardized in the North Central states.

II. *As to content of courses in history.*—

1. The recommendations of the committees that ancient history shall include oriental, Greek, and Roman history have been adopted. The recommendation to continue ancient history to 800 A.D. has attracted most attention.

2. The tendency in ancient history is to spend four or five weeks on oriental history, the remainder of the semester on Greek history, and the second semester on Roman history. This is in accordance with the recommendations of the committees.

Digitized by Google

3. The recommendations of the committees that less attention be given to military and constitutional detail apparently have not been adopted. Wars, dramatic and heroic scenes, religious, political, and constitutional development still occupy a prominent place in all courses in history. The committees advocate greater simplicity of treatment through plain talks and concrete materials.

4. In mediaeval and modern history the Committee of Nine recommends that the greatest emphasis should be placed upon nineteenth- and twentieth-century history. The printed courses of study show very little evidence that this recommendation has been adopted.

5. Both the Committee of Seven and the Committee of Five recommend that American history and civics be taught as a single subject. In 103 of the 242 schools or school systems civics is still taught as a separate course.

6. The committees recommend that colonial history should be taught in connection with English and modern European history, and in American history only a rapid survey should be made of this period. The printed courses show very little evidence that this recommendation has been observed.

7. In the general college-preparatory group of studies the modal requirement is one unit of American history, except in the classical and normal groups, where two units is the prevailing requirement. Some schools offer a special history "course" in which four years is the modal requirement.

8. In the language group of studies there is great variability in the amount of history required, the custom being four units of history in English "courses," two units (ancient and American) in Latin "courses," and one unit (American history) in modern language "courses."

9. In the four-year vocational group of studies one unit (American history) is the prevailing requirement. In vocational short "courses" the custom is to require no history.

Digitized by Google

STANFORD LIBRARY

LITERATURE À LA CARTE

JOHN B. OPDYCKE

Dining is a physical job.

Dining *à la carte* is an open job.

Dining *table d'hôte* is a blind-alley job.

If the present shortage in the European food supply has reduced the pageantry of dining over there, then certainly it is not an unmixed evil.

The Continental *table d'hôte* system used to be the one best argument for fasting; it still is if it still *is*.

Three years ago *table d'hôting* on the Continent was a ceremony —an intricate and elaborate form of culinary worship that was not only military in its administration, but also well-nigh martial in its execution.

From the anchovies to the *crème de menthe* (*vert, frappé*) the diner was kept ever conscious of the system. Not for a moment was he allowed to forget the lockstep mastication superimposed by the management of his *pension*. His good digestion (what paradox!) waited not on appetite, but on ritual. His menu was the be-all and the end-all of his craving for nourishment. Dining for him was become a fetish of formula; eating, a syncopated symphony as a matter of course—as a matter of many courses. His retinue of viands was served *à la rag*.

What then was more natural than that syncopated music and syncopated dancing should develop as accompaniments to syncopated feeding?

Whatever may be the doubts as to the priority in time of the egg and the chicken, there can be no doubt but that the cabaret is the legitimate child of the *table d'hôte*. It is but the echo of collective gormandizing, the consciousness of chewing set *en tempo*, the inevitable tintinnabulation of the music as it wells from the chorus of *table d'hôters*, the rhythmic reverberations of gastric gratification in the blissful, if blatant, consciousness of its bellyhood. Such was the distinguished origin of the grabaway cabaret!

Digitized by Google

A bell rings! A chord is struck! In march the stewards to a stately air bearing high the viands of the first despair. They may not go, they may not come again, until the chief rings his bell, the musicianeers strike their chord, and the stewards mark time in perfect unison. Even unto the fifteenth and twentieth generations of a single dinner is the ceremony visited in exactly the same manner, at exactly the same time per course per day, to exactly the same people. No mere mortal of a diner dares to be late, or the whole domestic machinery may be thrown out of gear and a conference of heads, from the scrubberial to the managerial, be necessitated. The culprit responsible for such a calamity should be made the subject of national scorn. For a mere diner to abstain from this viand or that were sufficient cause for exile to Siberia! At a certain hour the people throughout an empire must eat fish. At a certain time every day the emperor of a kingdom must be able to say to the dining members of his dining council, "Behold, at this moment my subjects are *demi tassing!*"

Discipline! Discipline in matters masticatory as in matters military! Discipline in matters intestinal as in matters international! Discipline in matters palatable as in matters political! Discipline!

The pompus parade of provender moves apace.

With many people the *table d'hôte* has become more than a habit; it has become a state of mind.

The Teutonic military method is a phase of *table d'hôte* frenzy.

And this prevalence of the *table d'hôte* tendency is not surprising when it is remembered that, though efficient as a system, it is nevertheless a very lazy, a very convenient, and therefore a very human way of getting a job done.

By this system the kitchen force of a establishment tells a man what, when, where, and how he must eat. He has to think about nothing whatever—nothing, that is, but a bill at the conclusion of the exercise, a tip after that, and perhaps, *probably*, some equatorial discomfort later on.

But *table d'hôting* is distinctly an adult process. It presupposes a sophistication in digestive operation, a tolerance in digestive receptiveness, a cosmopolitanism in digestive grasp, that the organism of a child could not possibly be possessed of.

Digitized by Google

Glutton though a child may be, he nevertheless objects to having his gluttony library-bureaued. The love of selection is a predominant quality of childhood and adolescence. Apportionment that is satisfactory to a young person is a miracle. More, apportionment made for children by adults that is appropriate and wholesome is as rare as it is miraculous.

Youth is the *à la carte* period of life; adulthood, the *table d'hôte* period. But the one is always trying to impose his point of view upon the other, and the adult, being the stronger and the one in authority, usually prevails to the greater degree, oftentimes to his own embarrassment and undoing.

Freedom of choice as well as freedom in choice belongs pre-eminently to youth, and this is so, must be so, even though the very exercise of freedom may bring pain and cause trouble subsequently.

> If *table d'hôting* you would go,
> Your appetite must be just so;
> If *à la carte* you masticate,
> Your appetite may fluctuate.

Adults are *just-so* people; children are fluctuators.

The regular, laid-out, cut-and-dried *table d'hôte* perpetuates a monotony of status in the nether physical regions and allows but narrow margins for wholesome contractions and expansions. It holds to a monarchical régime; it assumes assimilation by royal command.

The free, fluctuating, catch-as-catch-can *à la carte* is as elastic in its possibilities as the digestive organism of youth itself. It is accordingly democratic. It assumes nothing; indeed, it often entails anarchy, revolution, and bombastication of the in'ards! But then—to be free!

A syllabus is an educational *table d'hôte*, an adult concoction the ingredients for which are assembled, mixed, and served for the mental digestion of the young.

A curriculum is a collection of syllabi; in other words, a mobilization of educational *table d'hôtes*.

A school is the battlefield of the contending forces—the place where adult prescription contends with juvenile tactic, where *table d'hôte* preparedness and *à la carte* maneuver fight it out,

Digitized by Google

where strategy in storage and strategy on the spur out do themselves in combat.

The conceit of adulthood is nowhere more apparent, nowhere more assertive, than in its formulation of studies for the young. It *lays out* what it thinks pupils ought to study, how it thinks youth ought to study, and then tries to force the issue. It disregards to an astounding degree the things youth wants. It strangely enough forgets its own *à la carte* period in its *table d'hôte* maturity. And thus it renders the educational fare administered both unpalatable and indigestible.

Color, motion, animals, plants, objects, pictures, contests, contrasts, freedom, *yeas*—it is these youth would order from an *à la carte* menu in education.

Compliance, exactness, abstraction, sameness, inflexibility, nicety, books, words, don'ts, *nays*—it is these adults serve up on their *table d'hôte* menu in education.

Algebra, history, grammar, and, worst of all, cut-and-dried, *table d'hôte* reading—these canned products, these indigestibles, these ptomaines for the adolescent passionists and *à la carlists!* Give them liberty or give them these!

There is consequently a wholesale foundering and a complete set of hospital schools—schools for defectives, for atypicals, for waywards, for arrested developments, and so on.

Next in order of establishment must be schools for the haters of reading.

Reading is a mental and emotional job.

Reading *à la carte* is an open job.

Reading *table d'hôte* is a blind-alley job.

It is with the reading laid out for the young that the syllabists, the educational *table d'hôters*, do the greatest harm.

Not liking an edible is the best reason in the world for not eating it.

Not liking a book is the best reason in the world for not reading it.

But certain books must be read for discipline, say the *table d'hôters*, and so they prescribe *adult* books and recommend *adult* methods for their treatment in the classroom.

Digitized by Google

More than this—they follow out the *table d'hôte* régime to the last measure of its syncopating possibilities. Certain books are read and studied at certain specified times and in certain specified ways. It is easy to find whole statefuls of children analyzing the same poem at the same time in the same way—and concluding it with the same dislike! Not so very long ago a somewhat distinguished state superintendent said, pointing to a clock in his office, "Thirty-five thousand children at this present moment are answering this question."

He pointed to a question on the examination paper in his hand which read as follows: "Why did Godfrey Cass desert Molly Ferran?"

Thus were thirty-five thousand in the prime of life led to dabble with the crime of life as a result of the educational *table d'hôte* by which they had been victimized.

That theory that extols study primarily as discipline is extremely pluperfect; it is held only by the most pronounced *table d'hôte* thinkers. To study something just because it will do you good is to take castor oil intellectually or psychologically, or both. Put into practice in the study of literature, such a theory acts as a chronic emetic. Pupils in the higher elementary grades and in the high school need the literature that they like, need literature *à la carte* if they are to have any permanent benefit from it or liking for it.

There are three attitudes among pupils of these grades toward literature and reading. The majority do not like the books they are given to read. Some are keen to read books other than those used in the classroom. A few resign themselves and read thoroughly, if not keenly, the prescribed books.

In other words:

> Some hae meat and canna eat,
> And some would eat that want it;
> But we have meat and we can eat,
> And sae the Lord be thankit.

What is meat for one may be poison for another.

Literature *à la carte* will enable all to have the meat they like and are able to digest and enjoy.

Digitized by Google

Dr. Corson of Cornell proved years ago that the one best method of inculcating a genuine love for literature, as far as college students and adults are concerned, is the *à la carte* method—the reading aloud of the best prose and poetry to large groups.

Professor Copeland of Harvard is today proving the same method to be supreme—witness the attendance upon his readings and the after-attack upon the libraries.

The very same method may be used with high-school pupils, is being used with them in certain schools, with results that are vastly superior to those under the old *table d'hôte* system. Large bodies of pupils—sometimes as many as two and three hundred—are assembled two or three times a week. Literature of *their age* is read to them, along with the high spots—the youthful spots—in their prescribed books. There is no close analysis, no high-brow discussion such as the suburban Browning Society indulges when it meets of an evenin' to "do" Browning's *The Ring and the Book.*

The aims simply are to inculcate a human attitude toward literature and a natural, wholesome, sincere appreciation of it.

The means simply are the auditory appeal, the principle of mob psychology, and great discernment in the selection and grouping of readings.

Most of the literature pupils are required to read is too remote from their experience, too far removed from their point of view, too difficult for their mental digestion. The *à la carte* plan makes it possible for them to start on a simple, native fare and to work up gradually to a more complex, more ambitious menu.

Thus, "Casey at the Bat" may be an excellent beginning for a group of readings that deal with the subject of rivalry or contest, a subject always near to the heart of youth. This may be followed with Fred Emerson Brooks's "Old Ace"; this, in turn, with "How They Brought the Good News from Ghent to Aix," and "The Chariot Race" from *Ben Hur;* and the series may be fitly concluded with "Pheidippides."

This last is not always an easy poem for young people; it is not always, indeed, a likable poem. But placed at the conclusion of such a series it has been found to work marvels with those very pupils who could not have been reached by it except through some

Digitized by Google

such association. They are soon able to see that certain elements in the make-up of "Casey" were exemplified centuries ago in his Greek ancestor. On one definite occasion, after reading "Pheidippides" in this connection, they stormed the librarian for more "Marathon pomes."

From some such starting-point it is an easy matter to get pupils to initiate their own reading groups, their "squads of stories and poems." They are able to construct an *à la carte* menu in literature that is far better for their emotional enjoyment and intellectual nourishment than much of the stuff served up by their adult benefactors and well-wishers.

In one large *en masse* group of pupils it was found that seventeen different nationalities were represented. It was suggested that poems or short stories fairly representative of these different nationalities be procured and read. The result was most gratifying and inspiring. *Mother Goose* was present in many dialects and languages. Fairies, harpies, elves, trolls, kelpies, brownies, nixies, pixies, hobgoblins, urchins, and a host of other "invisibles" from various lands were likewise on hand. It was a promiscuous assembly of literary stars that entertained the group for two or three meetings, but the effects were pleasing and instructive beyond all anticipation.

A few of the other groups that have been worked out with excellent results are here set down. Each group was calculated to cover about an hour, but, as the titles will indicate, the work frequently ran over the allotted time.

A GROUP OF SEA POETRY

Kingsley's "The Three Fishers"
Clough's "Where Lies the Land"
Miller's "Columbus"
Proctor's "The Sea"
Masefield's "Ships" and "Sea Fever"
Cunningham's "A Sea Song"
Longfellow's "The Wreck of the Hesperus"
Tennyson's "Break, Break, Break"

A GROUP OF BABY POETRY

George Macdonald's "Baby"
Alfred Austin's "Mother-Song"

Digitized by Google

Swinburne's "Etude Realiste"
Holland's "Babyhood"
Riley's "The Way the Baby Woke" and "The Way the Baby Slept"
Samuel Minturn Peck's "My Little Girl"
Selections from Josephine Preston Peabody and Robert Louis Stevenson

A GROUP OF ANIMAL POETRY

Elizabeth Barrett Browning's "To Flush, My Dog"
Arnold's "Geist's Grave"
Foley's "A Friend"
Browning's "Tray"
Trowbridge's "The Vagabonds"
Guiterman's "The Legend of the First Cam-u-el" and others
Byron's "Inscription on the Monument of a Newfoundland Dog"
Gray's "On a Favorite Cat"

ONOMATOPOETIC POETRY

Poe's "The Bells" and "The Raven"
Browning's "Thru the Metidja to Abd-El-Kadr"
Hood's "Miss Kilmansegg" (the conclusion—"Gold")
Lanier's "Song of the Chattahoochee"
Noyes's "The Barrel Organ"
Riley's "Knee Deep in June" and others
Selections from Wells's *Nonsense Anthology*

AN HOUR WITH EUGENE FIELD

(Typical of "hours" with many poets and prose writers)

In Memoriam
The Ballad of the Phillaloo
In Memoriam of Mary Jane
Love's Sacrifice
A Leap Year Proposal
To Emma Abbott
Remorse
The False Orlando
A Story with an Awful Moral
Casey's Table d'Hôte

WAR STORIES

Alphonse Daudet's "The Last Lesson"
Percy Godfrey Savage's "Somewhere in Belgium"
Joseph Hall's "N.B."
Hornell Hart's "The Forced March"
Prosper Merimee's "The Taking of the Redoubt"
Kipling's "The Drums of the Fore and Aft"
George Cary Eggleston's "A Breach of Etiquette"
De Maupassant's "La Mere Sauvage"

Digitized by Google

BUSINESS STORIES

Edna Ferber's "The Self Starter"
Frank M. O'Brien's "Master of His Art"
Chap. iii in Frank Norris' *The Pit*
Redfield Ingalls' "Business and Ethics"
Henry Murger's "The Passage of the Red Sea"
Thomas F. Hoyne's "The Ego of the Metropolis" (newspaper)
Ludovic Halevy's "My Nephew Joseph" (newspaper)
Selections from Jack Lait's *Beef, Iron and Wine* (newspaper)

CHRISTMAS STORIES

Mary N. Murfree's "His Christmas Miracle" in *The Road of the Guerilla*
W. J. Locke's "A Christmas Mystery"
Thomas Bailey Aldrich's "A Christmas Phantasy"
O. Henry's "A Chaparral Christmas Gift"
Selections from Jack Lait's *Beef, Iron and Wine*
Selections from Dickinson's *Children's Book of Christmas Stories*, such as, Grace Margaret Gallager's "The Queerest Christmas"; Olive Thome Miller's "Christmas under the Snow," and others

CAT STORIES

Virginia West's "The Cat That Came Back"
Wilbur Daniel Steele's "The Yellow Cat"
Marcel Prevost's "The Woman and the Cat"
Selections from Mary E. Wilkins-Freeman's *Understudies*
Kipling's "The Maltese Cat"

DOG STORIES

Selections from John Muir's *Stickeen*
Selections from Alfred Ollivant's *Bob, Son of Battle*
Selections from Eleanor Atkinson's *Grayfriars Bobby*
Selections from Ouida's *A Dog of Flanders*
Selections from Brown's *Rab and His Friends*
John A. Moroso's "Buddy and Waffles"
Francis Gregg's "Whose Dog—?"
Chap. iii in Jack London's *Call of the Wild*
Richard Harding Davis' "Love Me, Love My Dog" (from *Van Bibber*)
Selections from Mark Twain's "A Dog's Tale"
Thomas Bailey Aldrich's "Goliath" (From *Two Bites at a Cherry*)
Harry C. Goodwin's "The Bad Man"
John Galsworthy's "Memories"

STORIES OF RIVALRY

Richard Harding Davis' "Mr. Travers' First Hunt" (From *Van Bibber*)
From Dickens' *Pickwick Papers*, "Mr. Winkle on Skates" and "Mr. Winkle Goes Gunning"

Digitized by Google

From Lew Wallace's *Ben Hur* "The Chariot Race"
Chap. xv in Henry A. Shute's *Plupy*
Contests in marksmanship such as, the archery contest in *Ivanhoe* and the shooting contest in *The Last of the Mohicans*

SCHOOL STORIES

Josephine Meyer's "The Green C—"
Any chapter or chapters from Kate Douglas Wiggin's *The Story of Patsy*
Selections from Kipling's *Stalkey and Co.*
Chap. i in Brontë's *Jane Eyre*
Selections from Dickens' *Nicholas Nickleby*
Latter part of chapter vi in Hughes' *Tom Brown's School Days*
Chap. ix in Dickens' *Oliver Twist*
Chap. ii in Mitchell's *Hugh Wynne*
"The Cuff Doblin Fight" in Thackeray's *Vanity Fair*
"The Hanky School" in *Sentimental Tommy*
Chap. v in Kate Douglas Wiggin's *Rebecca of Sunnybrook Farm*

DRESS STORIES

Chap. viii in Kate Douglas Wiggin's *Rebecca of Sunnybrook Farm*
Ethel M. Kelley's "Making over Mary"
Fannie Kilbourne's "Being like Nita"
Katherine Kingsley Crosby's "The Pink Slipper"

TRAIN STORIES

Selections from Booth Tarkington's *Great K. and A. Train Robbery*
Selections from Webster's *Calumet K*
Frank W. Tuttle's "On the Local Express"
O. Henry's "The Hiding of Black Bill"
Lynn Roby Meekins' "Freckles"

In addition to these the best chapters or sections from all the required books are read as above indicated. What adult outside of the *table d'hôte* class reads *Ivanhoe through* today? There are about ten chapters in the novel that are enjoyable and helpful for *en masse* treatment. The rest of the story is negligible except for purposes of plot connection. These salients are served up *à la carte*, as are likewise the best parts of *Silas Marner*, *The Sketch Book*, *The House of the Seven Gables*, *The Tale of Two Cities*, *Sir Roger DeCoverley*, and the rest.

Poe's dictum regarding mere length in a piece of literature bears with particular significance upon the reading aloud of a story or a poem or a play. The longer works are all *à-la-cartable*

Digitized by Google

for purposes of adolescent consumption and are really the better for such cutting. The pulsating passages only must be read. If less throbbing passages get read too, well and good; it not, also well and good.

The intensive study of a literature classic never begets an intensive appreciation of that classic. It frequently begets an intensive hatred. If called upon to parse Milton's *Paradise Lost*, one may get certain satisfactions out of it by way of calling God a mere noun or by pointing out that such a disagreeable thing as a participle may modify the Devil. But there are no other satisfactions in such a study, and certainly there are no benefits to be derived from it.

But there is a free and wholesome contagion that follows from the *à la carte, en masse* plan of presenting the gems of literature. And the results are vastly more permanent and impressive, even though they do sometimes come by the "doggerel" route. The laughs are bigger and grander; the "weeps" are deeper and wetter, and all of the emotions between the two are truer and more spontaneous by virtue of the plan and the situation. Incidentally, the arrangement is economical, for one good reader may do the work of four or five teachers. (This may be why some of them call it literature *in mess!*)

It is said that literature is a thing of the spirit.

It may be said, then, that examinations are a thing of the flesh.

Who of the flesh shall attempt to examine with success into the things of the spirit therefore?

Verily, the books that pupils love, neither God nor man can fail them in; and the books they do not love, surely no one wants to pass them in.

As well examine a Continental diner closely on the food values and constituencies of his *table d'hôte* as to examine a child on the book he has read. It is safe to leave digestion to itself if the dinner has been wholesome.

Children no longer love bad literature (if there can be such a paradoxical thing). They no longer wallow in the slime of the penny dreadfuls. "Nick Carter" is dead and done with—Glory be! The better literary fare has been supplied so cheaply and so

Digitized by Google

abundantly that it is almost safe to say that a child may read anything.

Better than all is the fact that children do not love the seamy sex stuff that even educators serve up to them. A teacher who has done the *en masse* work in literature in a large high school for two years, and who has received hundreds of requests to read certain selections, has never yet been asked to read a tainted bit, has never even been asked about literature of that sort. On the other hand, he has read to large groups of girls passages of questionable delicacy from the prescribed books without any unpleasant reactions whatever and without the slightest tendency toward misinterpretation.

Queer, by the way, that the reading recommended by the *table d'hôte* adults for the young should have *to a book* something objectionable in them, usually on the sex problem.

Queer, too, that in the *à la carte* treatment of literature in high school this phase does not present itself at all?

No. The explanation is just exactly the difference between the two systems of dining.

The *table d'hôte* system is narrow and confined and bigoted and artificial; it makes the market wait upon its form and formula; its variety is limited by tradition; its scope, by season and locality. It seeks out food types and plays them up always in the same dress. It thrives upon the storage-houses of the world.

The *à la carte* system, on the other hand, is free and fresh and eclectic; wide-range in its choice; appetizing in its variety; waits upon markets and seasons and localities the whole world over and draws from them accordingly. It seeks out individual delicacies and plays them up. It thrives upon the gardens of the world.

Now, there may be some exaggeration in all this comparison, kind reader, but it is only the exaggeration of the truth; it is not by any means a manufacture from the whole cloth. And for corrective purposes it is as justifiable an exaggeration as is that of the microscope, the telescope, or the X-ray.

Digitized by Google

STANDARDIZED TESTS AND THE IMPROVEMENT OF TEACHING IN FIRST-YEAR ALGEBRA[1]

H. O. RUGG
School of Education, University of Chicago
AND
J. R. CLARK
Parker High School, Chicago

A. NECESSARY CRITERIA FOR A PROGRAM FOR THE IMPROVEMENT OF INSTRUCTION

It is possible to attack the problem of the improvement of instruction in a high-school subject in a scientific experimental way. To do so in the most complete fashion will necessitate the setting up of a thoroughgoing program embracing the following steps:

1. Stating definitely the aims and outcomes of instruction in the particular course of study.

2. Classifying clearly the subject-matter of the course on a basis of the principal modes of learning involved in its mastery; a statement of the content of the course, from a standpoint both of the amount of material included and of the classification, arrangement, and order of presentation, supplemented by a detailed analysis of the mental processes called into play by different types of subject-matter.

3. *Designing and giving tests which will adequately measure ability in each of the fundamental phases of the subject-matter agreed upon.*

4. Critically evaluating the testing so as to give a complete and differentiated statement of fundamental weaknesses in learning (e.g., as revealed by the typical errors made by pupils).

5. Setting up experimental attempts to eliminate these fundamental weaknesses; from the standpoint of economy of time this

[1] A final report on the "Experimental Determination of Standards in First Year Algebra," made to the Mathematics Section of the University of Illinois High-School Conference, November 24, 1916.

Digitized by Google

means *the design of practice exercises, the determination of specific "best ways" of presenting material, of order of presentation, and of optimum length of drills.*

In brief, the writers have carried through to completion the first four steps of this program and have begun work on the fifth step. We believe that sufficiently adequate standards have been set up to enable teachers to attack the problems of teaching first-year algebra in a thoroughly experimental way. We suggest careful consideration of the results of the work to date, and the thoroughgoing co-operation of teachers of algebra generally, in improving instruction in the subject.

I. THE AIMS AND OUTCOMES OF INSTRUCTION

The first step in the program of improving teaching in first-year algebra involves the definite statement of the aims and outcomes of instruction. In the preliminary report of this investigation (see *School Review*, January, 1916) we made a complete statement of these aims and outcomes as follows:

a) THE AIM OF FIRST-YEAR ALGEBRA INSTRUCTION

The conduct of this investigation is based upon the following statement of the ultimate aim of first-year algebra: the successful use of algebraic symbolism in meeting new problem-situations, either (1) purely algebraic situations; (2) general mathematical situations (such as are found in mathematics courses other than algebra); or (3) non-symbolic situations, including various types of "practical" or "applied" problems not expressed in mathematical language.

b) THE OUTCOMES OF FIRST-YEAR ALGEBRA

Believing that some statement of the assumed outcomes of first-year algebra should be made the basis for further analysis, the following tentative statement of these outcomes is made:

A. *Immediate, specific, and preparatory outcomes.*—These include the comprehension, interpretation, and manipulation of the specific "automatic" operations involved in algebraic solutions; e.g., the four fundamentals as used with various type problems, factoring, removal of parentheses, etc. Certain of these are to be used in many specific algebra problems and in the solution of other mathematical problems; they are to be mastered as tools, preparatory to the taking of other mathematical courses, as well as for use as automatic tools for the solution of all types of "applied" problems. These involve primarily the learning of rules and the formation of specific habits of manipulation.

Digitized by Google

B. *Immediate generalized outcomes.*—These involve recourse to selective, analytic, and conceptualizing abilities; ability to apply principles, in addition to ability to remember rules and to make certain fundamental habitual adjustments in the solution of general practical and applied problems and in solution of problems belonging primarily to other mathematical fields.

C. *Remote and less tangible outcomes.*—The development of the ability to deal with general number concepts and "think quantitatively"; the development of attitudes of (1) orientation in algebraic or general mathematical fields containing problem-situations; (2) confidence in one's ability to use successfully algebraic symbols in meeting new situations; (3) a broadened intellectual background or perspective for the general cultural comprehension and interpretation of the scientific methods by which technical problems may be solved, i.e., the development of a "scientific attitude." In the present attack on the general problem of standards in this field it is not proposed to consider this third group of outcomes. Standards in first-year algebra, we believe, should deal primarily with the "automatic" processes and only very little with these other more indefinite ones. We would differentiate these three types of outcome by saying that the immediate specific and generalized outcomes are subject to measurement, and that for our purposes the intangible outcomes are not.

The foregoing statement, made in the preliminary report, was doubtless misunderstood by many teachers of algebra. The commonly accepted inference was that "standardization," according to our aims, methods, and criteria, meant complete "mechanization" of first-year algebra instruction. Nothing is farther from the truth concerning our real position than that. For that reason we wish to emphasize herewith: *Our position—the fundamental aim of first-year algebra: to develop ability to use algebraic methods in the solution of "original" or "novel" problems stated in verbal form.* Three years of research in this field has convinced us, however, that *efficiency in the solution of "original problems" is closely correlated with a thorough mastery of each of the tool operations.* This report will present detailed evidence on this point.

It has been shown that success in teaching algebra depends primarily on the teacher's knowledge of the typical difficulties which the pupils will meet in learning algebra. These difficulties may be found by testing the pupils' ability to manipulate the different formal operations and to use these in the solution of "translation" problems. To design tests for these operations necessitates a clear-cut statement and classification of the formal

Digitized by Google

operations themselves. The committee now wishes to go on record as stating its belief that the *fundamental formal operations* of first-year algebra, ability in which should be tested, are those given in the following pages and that *ability in the manipulation of each of these should be made absolutely automatic.*

The necessity for automatic efficiency in the formal processes.—Teachers agree: that pupils must have *automatic* skill in manipulating the "tables" in arithmetic; that the spelling of "common words" shall be absolutely mastered (*automatized*) so that pupils will *never* make a mistake in spelling them; that a certain quality of handwriting shall be written by our pupils at a definite speed and that it shall be done *automatically;* that pupils shall perfect certain "*automatic*" *habits* of "reading" in the early years so that lessons in history and geography and literature shall not be turned into lessons in the development of the formal skill in getting meaning from the printed page.

In the same way, in order that the pupil may use successfully algebraic methods in the solution of verbally stated problems, he must have absolute mastery of the tool operations he is going to use in that solution. A pupil should remove parentheses, factor, solve simple equations, use special products, exponents, radicals, etc., just as he uses the multiplication table, writes, spells, or gets meaning from written language—*in a word, automatically.* It is not economic or expedient to force pupils to raise to "thinking" or "reasoning" levels, the formal manipulation of these purely tool operations. The Committee on Standards is, therefore, insisting on thoroughness in the formal operations, in the interest of "*economy of time*" *in first-year algebra; in other words, in order that a larger amount of time may be spent in the use of the formal operations in solving "original" problems.* This report will show methods by which, it is believed, this may be done.

The reader should be cautioned that "automatism" in the more complex processes (e.g., fractional equations) does not necessarily imply the instantaneous reaction of the pupil with the completely worked-out "answer" to the problem. In the case of problems containing but one or two steps the automatic response should be the "answer." But, in the cases of problems involving

Digitized by Google

several steps, *automatism means the continuous unbroken reaction of the pupil with the proper steps in the solution.* The steps in the procedure of manipulation of the operation in question should be made completely a part of his automatic system of habits.

II. THE CONTENT OF FIRST-YEAR ALGEBRA

Our program next demands a complete classification of the content of first-year algebra. We have differentiated sharply the content of algebra between the formal processes of algebra and their application in verbal problems. Our preliminary investigation has shown that to test adequately the algebraic abilities of pupils in the use of algebraic symbolism in "original situations" *we must draw a sharp line between abilities in the formal processes and abilities in their application.*[1] The former may be measured by one type of test, *a formal time test*, the latter by another type, *the translation verbal test*, in which it is questionable whether there should be an "active" time limit. We give next a mere list of:

a) The fundamental operations of first-year algebra ability in which should be tested.—

1. Removal of parentheses
2. Combining terms
3. Subtraction
4. Evaluation
5. Special products
6. Factoring
7. Exponents
8. Clearing of fractions and fractional equations
9. Quadratic equations
10. Graphing of equations
11. Solution of "practical" formulae
12. Simultaneous equations

Mr. E. C. Denny, of the Illinois Committee on Standards, has made a very complete analysis of the content of first-year algebra as shown by currently used textbooks and the distribution of problems that indicate the types of opportunity for training which are now offered. It is expected that this report will be published separately; therefore the material will not be duplicated here. We may say in brief that the material collected in this phase of the work of the committee has been used to check up the organization of content and the interpretation of the results of testing pupils. His data lend added weight to our conclusions.

[1] See *School Review*, January, 1916, preliminary report of the Committee on Standards in First-Year Algebra.

Digitized by Google

b) The types of verbal problems represented by our study.—Verbal problems may be classified on two bases: (1) on the basis of degree of equations involved and the number of unknowns; (2) on the basis of the subject-matter composing the problems. The latter basis lends itself more easily to the design and classification of verbal problems for purposes of testing and was used in this investigation. The problems for which "scoring weights" have been worked out in this study fall under the following heads: (1) geometry problems (area, perimeter, angle, line, and volume problems); (2) physics problems (temperature, lever, falling bodies, formulae for sound, light, etc.); (3) motion problems; (4) problems involving ratio and proportion; (5) coin problems; (6) work problems; (7) mixture problems; (8) digit and number problems; (9) age problems; (10) clock problems; (11) percentage problems.

III. THE STANDARDIZED TESTS IN FIRST-YEAR ALGEBRA

The statement of the aims and outcomes of instruction and the content of the subject-matter paves the way for the design of tests for each of the fundamental operations. Our report[1] for 1915 treated fully the important question of *the determination of a valid method for measuring efficiency in the formal processes and in their application in verbal problems.* It was shown there (1) that the teacher-judgment method did not lead to an accurate determination of the difficulty of algebra problems; (2) that "mixed scales," containing both formal and translation problems, are not valid measures of the single types of mental processes involved in particular kinds of algebraic operations; (3) that the best hypothesis concerning difficulty of algebra problems is that based upon the proportion of a large group of pupils solving the problems.

The third revision of the Standardized Algebra Tests (Rugg and Clark) was submitted to teachers of algebra during the spring of 1916.[2] The tests have been constructed, criticized, and revised

[1] *School Review*, January, 1916.

[2] The eleven printed tests for the formal processes, together with complete lists of standardized verbal "translation" problems, may be secured in quantities from H. O. Rugg, School of Education, University of Chicago. The tests will be sold during this year at 4 cents per set (a set to a pupil). The fourth reprinting (within the next year) will enable us to sell these at a lower rate. The price will be set as nearly as possible on a "cost" basis, no profit being made on the tests.

Digitized by Google

three times in accordance with the principles of design set forth last year. It should be pointed out that other algebra tests which have been made up, printed, and used by many school systems, do not make use of detailed principles of design. This investigation has convinced us that the following principles are essential to sound testing. We repeat the fundamental ones from last year's report:

a) PRINCIPLES GOVERNING THE SELECTION OF TEST PROBLEMS AND CONDUCT OF TESTS

In order that a scale for measuring efficiency in elementary algebra may successfully test automatic efficiency and independent solution it must be composed of two general types of test: (1) a specific test series (A) which will test the specific manipulative abilities of students in all the basic automatic operations involved in the solution of algebra problems; (2) a translation test (B) which will test the independent ability of the student in practical or applied problems.

1. *The formal tests*, as designed and presented herewith, conform to the following requirements:

a) They are made up of a series of problem-tests each of which is designed as a specific test for a definite automatic operation in algebra solution.

b) Each specific test is made up of a number of problems (10 to 28) each of an elemental nature and involving the operation in question, and for each of which the degree of difficulty has been determined carefully by experimentation.

c) *The cycle principle of design.*—Because it is impossible to arrange separate tests for all kinds of operations involved (owing to lack of time in classroom handling, etc.), those problems which involved *closely related operations were grouped in one test and arranged rigidly in rotation.* Thus the student solving 20 problems may be compared with the one solving 10 problems.

d) Each test was designed as a time test, the time being so arranged (by experimentation) that no student could quite finish the test in the time given, but so that all could do a considerable number—otherwise the measure of efficiency would have been too coarse. Care was taken to see that all pupils started and stopped the test at the same instant.

e) The directions were all given orally by the experimenters so that differences in rate of reading and comprehending directions might not complicate results.

f) Test problems were of the alternative sort; i.e., they were designed to give either right or wrong answers—otherwise careful evaluation and weighing of answers would have been necessary.

Digitized by Google

Time tests of formal processes in any subject of study must be designed in accordance with:

The cycle principle of rotation of problems.—The various ways in which the symbols, letters, etc., may be arranged for a given type of operation *should appear in exact rotation* in the test. For example, in Test I there are six principal ways in which parentheses problems may be "arranged," i.e., considering the use of the + and − signs, (), letters, etc. These appear in Test I in such order that in the first, seventh, thirteenth, nineteenth, and twenty-fifth problems the signs and symbols occupy the same relative positions, i.e., the problems involve the same algebraic and mental processes. Our research shows that *it is of the utmost importance that this "cycle principle" be followed in the most rigorous fashion.* The importance of this point is indicated by the differences in difficulty that are revealed by Table I, which shows how a few failures to follow the principle *exactly* caused quite different percentages of failure on the part of pupils in solving the problems.

Attention should be called to the fact that the validity of other algebra tests which have been drawn up without regard to this principle should be seriously called in question. For example, the Indiana Algebra Tests, based upon the "Standard Research Tests" devised by W. S. Monroe, sent out from the University of Indiana, have been made up in such a way that the efficiency of pupils solving a given number of problems on any test cannot be validly compared with the efficiency of pupils solving half as many, a third as many, twice as many, etc. To illustrate this point we reproduce Test II of this series of tests:

1. $4(3x-4)=$
2. $-5x^3(4x-1)=$
3. $-7(2+3x)=$
4. $-5(-4+6x)=$
5. $3(-1+6x)=$
6. $-4a^2(8x+4a^2)=$
7. $-7(-5x+8)=$
8. $-8x(-3x-5a^2)=$
9. $6(2-4x)=$
10. $-x(5-6x)=$
11. $-3(9+x)=$
12. $-5(-7x+3)=$
13. $-5(-4x-6y)=$
14. $-6y^2(-9-7x)=$
15. $-4(x-2)=$

Certainly no definite principle of design controls the placing of problems in this test. Our results show that *this is an essential*

Digitized by Google

step that must be followed if we are to have sound criticism of school practice in these matters. It can be suggested from the results of our investigation that these problems, many of which are several times as difficult as others (problem 1 compared to problems 2, 6, 8, or 14, for example), are not put together in such a way as to lead to comparable results in testing pupils.

The construction of tests to measure the abilities of pupils should be based upon the most scientifically worked-out research principles. Recognizing the urgent need for care in such work, we have checked the "cycle principle" of rotating problems in two different years of experimentation. The results are given in Table I for readers interested in this phase of the work. This table gives the percentage of all of those pupils (over 2,500 took the various tests) who attempted each problem in each test, and who failed to work the problem in question correctly. In this investigation it has not been possible to inquire in detail into the effect of "practice" in working the recurring problems of the cycle. We believe that it will operate in the more difficult tests to give a gradually decreasing percentage of failures on successive problems of a particular type. Table I has been made up and examined carefully for the purpose of discovering which problems in each test are not roughly equal in difficulty to corresponding problems in other cycles. A problem in which a distinctly larger or smaller percentage of failures is found has been replaced by another. Careful study of such problems, in almost all cases, has revealed peculiarities in construction, *or in scoring*, that cause a problem to be thrown out. For example, in problem 3 in Test VI the percentage of failures is 3.5 per cent as compared to from 30 per cent to 36 per cent in all other corresponding problems. Study shows that the problem is so constructed that we cannot determine by an inspection of the pupil's answer whether the mental process is correct or not. The particular error that students make in this problem is that due to "adding exponents instead of multiplying them"; $(n^2)^2$ gives the same answer regardless of the process and thus the work of the pupil cannot be diagnosed to find out whether he is "right" or not. This method of analysis has been applied to each problem in each test and the accompanying list (Table I) of corrections is given.

Digitized by Google

The tests will be reprinted this year with these corrections made. We believe that they will then thoroughly justify the title "Standardized Tests in First-Year Algebra," and that they may be used by teachers to check up specifically the ability of their pupils in the formal operations.

TABLE I

PERCENTAGE OF PUPILS FAILING TO WORK CORRECTLY CORRESPONDING PROBLEMS ON SUCCESSIVE CYCLES OF EACH TEST

Problems are arranged in columns so that the percentage of pupils failing to work "*corresponding*" problems of successive cycles appear in any one column. To determine relative difficulty of *successive problems in one cycle read horizontally across the table.* Problems which call for study and redesign are indicated by inclosing the percentages thus ( ).

	Test I (Removal of Parentheses)						Test II (Special Products)			
No. of Cycle	First Prob. in Each Cycle	Second Prob.	Third Prob.	Fourth Prob.	Fifth Prob.	Sixth Prob.	First Prob. in Each Cycle	Second Prob.	Third Prob.	Fourth Prob.
1.....	2.5	2.5	9.0	6.5	9.5	8.0	28.1	29.1	30.1	19.4
2.....	3.2	1.1	7.5	4.4	8.7	(12.2)	27.6	18.8	26.3	14.6
3.....	2.2	3.4	8.5	6.7	7.6	7.3	32.4	17.4	22.3	11.2
4.....	4.2	3.0	(12.7)	9.2	4.3	5.2	25.4	(5.84)	19.9	12.5
5.....	5.6	3.3	3.7	2.2	5.3	3.3	22.4	13.1	28.2	(7.82)
6.....	.....	.....	.....	.....	.....	.....	27.4	(8.0)	22.8	(21.3)

	Test III (Substitution)					Test IV (Factoring)				
No. of Cycle	First Prob. in Each Cycle	Second Prob.	Third Prob.	Fourth Prob.	Fifth Prob.	First Prob. in Each Cycle	Second Prob.	Third Prob.	Fourth Prob.	Fifth Prob.
1.....	32.5	34.8	33.2	27.0	33.0	41.5	10.1	7.65	8.6	33.6
2.....	25.8	29.3	31.1	22.0	27.3	33.7	9.8	12.9	8.4	23.5
3.....	20.0	19.1	22.5	12.6	16.1	32.2	9.5	8.6	5.3	27.3
4.....	14.5	23.4	18.5	12.9	11.8	29.1	11.4	(23.6)	5.7	(53.9)
5.....	.....	.....	.....	.....	.....	29.5	5.6	13.5	(11.1)	10.9

	Test V (Fractional Equations)					Test VI (Exponents)					
No. of Cycle	First Prob. in Each Cycle	Second Prob.	Third Prob.	Fourth Prob.	Fifth Prob.	First Prob. in Each Cycle	Second Prob	Third Prob.	Fourth Prob.	Fifth Prob.	Sixth Prob.
1.....	63.0	44.0	53.1	52.6	(41.7)	8.5	(37.7)	(3.5)	11.6	(16.1)	3.5
2.....	61.7	36.9	58.8	(35.5)	(66.9)	8.5	8.5	32.7	14.1	(36.2)	2.5
3.....	55.4	33.1	61.8	48.5	55.0	4.0	7.1	33.9	11.7	45.9	6.2
4.....	65.2	33.3	(36.6)	57.2	51.6	3.7	10.7	29.2	10.9	38.9	(1.7)
5.....	59.8	31.3	(40.0)	52.6	31.6	7.9	8.1	33.5	9.2	43.1	2.1
6.....	.....	.....	.....	.....	.....	3.4	9.2	36.0	14.8	46.2	6.4

Digitized by Google

TABLE I—*Continued*

Test VII (Quadratic Equations)				Test VIII (Graphing Equations)					
No. of Cycle	First Prob. in Each Cycle	Second Prob.	Third Prob.	First Prob.	Second Prob.	Third Prob.	Fourth Prob.	Fifth Prob.	Sixth Prob.
1.....	19.7	34.3	23.7	55.9	53.5	43.4	51.8	50.5	46.4
2.....	22.0	29.0	24.8						
3.....	17.6	28.5	40.4	(Only one cycle)					
4.....	20.6	29.1	43.8						
5.....	15.6	29.9	35.7						
6.....	13.9	(39.1)	33.0						
7.....	10.7	30.7	25.8						

Test IX (Radicals)				Test X (Solution of Formulae)						Test XI (Simultaneous Equations)		
No. of Cycle	First Prob. in Each Cycle	Second Prob.	Third Prob.	First Prob. in Each Cycle	Second Prob.	Third Prob.	Fourth Prob.	Fifth Prob.	Sixth Prob.	First Prob. in Each Cycle	Second Prob.	Third Prob.
1.....	23.1	41.1	50.8	(34.2)	42.0	64.3	95.1	64.6	60.1	(32.5)	23.1	37.6
2.....	16.0	44.2	51.7	46.0	43.0	60.1	92.7	62.0	62.1	(17.9)	27.7	23.1
3.....	(35.5)	42.5	44.3	56.2	39.0	57.8	94.6	57.1	59.3	23.9	17.1	20.9
4.....	18.6	28.4	50.0	53.8	41.0	55.8	93.8	52.3	56.9	23.0	(10.0)	32.5
5.....	(33.1)	33.6	45.7							25.8	19.7	7.4
6.....	14.7	30.0	(59.8)									
7.....	8.2	(19.8)	48.7									

B. THE FIRST CYCLE OF EACH OF THE ELEVEN FORMAL TESTS TOGETHER WITH THE SPECIFIC CHANGES THAT WILL BE MADE IN REPRINTING THE TESTS IN 1917

We give next the exact problems used in the first cycle of each test. Teachers of algebra can thus see exactly how many different arrangements of material are offered in each specific operation. We also list the exact changes that are to be made in each problem. To understand this discussion thoroughly the reader should secure copies of the tests and compare each change with the data of Table I.

1. *Removal of parentheses.*—Tested by Test I. Time, 2 minutes.

First Cycle

$$6(3x+8)$$
$$5(4x-2)$$
$$-3(8x+3)$$
$$-4(3x-4)$$
$$9(-7x-1)$$
$$-8(-4x-7)$$

No changes to be made in particular problems in redesigning tests this year.

Digitized by Google

2. *Special products.*—Tested by Test II. Time, 3 minutes. Each cycle now contains 4 problems, arranged as follows in first cycle:

1. $(2x-3)^2$
2. $(3m+n^2)(3m-n^2)$
3. $(a-4)(a+5)$
4. $(2b+3a)(2b-3a)$

Because of the relative importance of the following type, No. 5, i.e., $(5x+1)(x+3)$, Test II will be redesigned to give a cycle in which the order of problems is as follows: problem 4 being replaced by No. 5. First cycle to read:

$(2x-3)^2$
$(3m+n^2)(3m-n^2)$
$(a-x)(a+5)$
$(5x+1)(x+3)$

Thus the fourth problem in each cycle will be the corresponding problem from Test IV (factoring), that is, Nos. 5, 10, 15, 20, 25.

3. *Substitution or evaluation.*—Tested by Test III. Time, 5 minutes.

First Cycle

If $x=4$ and $y=2$ what does $2x^2-3xy=$?
If $a=3$ and $b=2$ " " $3ab+ab^2=$?
If $c=2$ and $d=5$ " " $cd^2-2cd=$?
If $p=4$ and $q=3$ " " $p^2+4pq=$?
If $x=3$ and $y=5$ " " $x^2+2x^2y=$?

No changes to be made in this test.

4. *Factoring.*—Tested by Test IV. Time, 5 minutes.

First Cycle

$5x^2+15x^3$
a^2-64
y^2-6y+9
$b^2+11b+28$
$5x^2+16x+3$

Changes to be made in particular problems (18, 20, 24):

Prob. No.	Now reads:	It will read:
18	$p^2-12p+36$*	$p^2-18p+81$*
20	$9x^2+33x+18$*	$3x^2+22x+35$*
24	$a^2+10a+24$*	$a^2+10a+21$*

*$p^2-12p+36$ and $9x^2+33x+18$ offer many possibilities in factoring, e.g., 6, 6; 9, 4; 18, 2; 12, 3; 36, 1; more than one of which gives a middle term approximating 12. Corresponding problems in other cycles do not give this. Hence such problems will be changed as indicated above.

Digitized by Google

5. *Solution of fractional equations.*—Tested by Test V. Time, 12 minutes.

First Cycle

$$\frac{4x-2}{3}-\frac{x-3}{4}=0$$

$$\frac{x+1}{x-1}=\frac{5}{3}$$

$$\frac{4}{3+x}-\frac{2}{1+x}=0$$

$$\frac{x+8}{x+9}=\frac{x-5}{x-7}$$

$$\frac{3x}{4}+\frac{3x}{2}=5$$

Changes to be made in particular problems in the test (9, 10):

Prob. No.	Now reads:	It will read:
9	$\frac{x-6}{x+2}=\frac{x-4}{x+5}$*	$\frac{x-6}{x-2}=\frac{x+4}{x+5}$*
10	$\frac{x}{24}+\frac{8x}{4}=17$†	$\frac{x}{12}+\frac{8x}{4}=2$

* In dividing by the coefficient of x this problem did not involve the use of signs, all other corresponding problems did.

† Change made because of unequal degree of arithmetic difficulty.

6. *Exponents.*—Tested by Test VI. Time, 3 minutes.

First Cycle

$$a^3 \cdot a^5 =$$

$$5x^7 \cdot 6a^5 =$$

$$(n^2)^2 =$$

$$\frac{c^3}{c^2} =$$

$$(ba^2)^2 =$$

$$x^7 \cdot x =$$

Changes (2, 3, 5):

Prob. No.	Now reads:	It will read:
2	$5x^7 \cdot 6a^5$*	$5x^7 \cdot 6x^5$*
3	$(n^2)^2$†	$(n^2)^3$†
5	$(ba^2)^2$†	$(ba^2)^4$†

* Mistake in printing.

† Answer does not reveal specific operation.

7. *Solution of quadratic equations.*—Tested by Test VII. Time, 7 minutes.

First Cycle

$$x^2-81=0$$

$$y^2+y=6$$

$$n^2-7n=-12$$

Digitized by Google

Changes (9, 12, 17):

Prob. No.	Now reads:	Will read:
9	$m^2+5m=6$	$m^2-5m=14$
12	$q^2+13q=30$	$q^2-11q=26$
17	$a^2-10a=24$*	$a^2-6a=27$*

*Too many possibilities of factoring the 24.

Additions.—No recurring problems of the type $m^2+5m=6$ were used in the 1916 printing of the tests. They will be reprinted to include this type as an additional problem in each cycle.

8. *Finding roots by graphs.*—Tested by Test VIII. Time, 12 minutes.

Six graphing problems on the sheet of this type:

Find the roots of $x-y=4$

$2x+y=5$ by drawing the graphs.

No changes.

9. *Expressing radicals in simplest radical form.*—Tested by Test IX. Time, 3 minutes.

First Cycle

$\sqrt{8}$

$\sqrt{a^3b^4}$

$\sqrt{2/3}$

Changes (6, 7, 13, 18, 19, 20):

Prob. No.	Now reads:	Will read:
6	$\sqrt{3/5}$*	$\sqrt{3/10}$*
7	$\sqrt{32}$	$\sqrt{12}$
13	$\sqrt{48}$	$\sqrt{45}$
18	$\sqrt{3/8}$†	$\sqrt{3/11}$
19	$\sqrt{20}$	$\sqrt{24}$
20	$\sqrt{b^3c^2}$	$\sqrt{b^7c^{10}}$

*To avoid duplication.

† Multiplying by denominator introduces in numerator perfect square factor.

10. *Solution of simple equations (practical formulae).*—Tested by Test X. Time, 7 minutes.

First Cycle

$$V=LWh$$

$$c=\frac{E}{R}$$

$$E=\frac{PL}{K}$$

$$L=\frac{Mt-g}{t}$$

$$I=\frac{bd^3}{3}$$

$$E^2=\frac{JWhr}{t}$$

Digitized by Google

Changes (1, 19):

Prob. No.	Now reads:	Will read:
1	$V=LWh$	Interchange No. 1 and No. 19 because
19	$P=ahw$	of common use of No. 1.

11. *Simultaneous equations.*—Tested by Test XI. Time, 12 minutes.

$$2x+y=10$$
$$3x-2y=1$$

$$2x=3y+3$$
$$5x+3y=39$$

$$4n-2r=0$$
$$3n+5r=13$$

Problems in which changes will be made in redesigning Test XI (4):

Prob. No.	Now reads:	Will read:
4	$5b+c=21$	$5b+c=21$
	$6b-2c=22$	$3b-2c=10$

ADDITIONAL "FUNDAMENTAL OPERATIONS" FOR WHICH TESTS WILL BE DESIGNED THIS YEAR

1. *Subtraction.*

Sample cycle:

1st problem: From $2a-3b+5c$ take $5a+4b-c$
2d problem: Take $4x+2y-6z$ from $2x-y+z$
3d problem: Subtract $3r-5x+10t$ from $r+s+4t$

2. *Clearing of fractions.*

3. *Combining terms.*

C. METHODS OF MEASURING ABILITY TO USE ALGEBRAIC METHODS IN THE SOLUTION OF "ORIGINAL" VERBAL PROBLEMS

Algebraic abilities are of two distinct kinds: (1) that involved in translating "word problems" into algebraic symbolism; (2) that involved in manipulating the formal operations. In the testing done in 1915 by this committee the former type (involving "reasoning ability") was measured by tests which required the pupil to do two distinctly different things: (1) state the verbal *problem* in algebraic form (i.e., give the equational relation); (2) work through the manipulation of the formal operations to the statement of the final answer. The result was that the incorrectness of the answer of the pupils did not indicate which type of error had been made. The revised method of testing "reasoning" abilities is to require

Digitized by Google

the pupil to do but one thing: *translate the problem into algebraic language.* The ability to manipulate the formal operation is measured by the appropriate formal test. In this way our scoring is *not* complicated by two or more different types of mental process.

THE DESIGN OF "REASONING TESTS"

a) *Shall they be time tests?*—In our 1915 principles of design, we established the principle that efficiency of manipulation of formal operations should be measured by the number of problems of a given type that could be done in a unit of time—that is, *formal tests must be time tests.* On the other hand, since we have as yet in educational research no definite means of equating speed and accuracy in working problems, we have decided to determine the difficulty of "verbal problems" (and thus the "weights" to be used in scoring pupils) by having pupils solve them without the complicating pressure of time.

b) *Principles of design of verbal tests.*—Thus the principles of design underlying the two methods of measuring ability are: (1) for the formal operations, group together in one test all necessary arrangements of letters, symbols, etc. (observing rigidly the "cycle" principle), and measure the efficiency by the number of problems worked in a unit of time (say, a minute); (2) for the verbal problems: (*a*) design tests of verbal problems (a score or more of such lists ought to be available eventually) ranging in degree of difficulty from very easy problems (which nearly all pupils will solve correctly) to very difficult problems (which but few pupils will solve correctly); (*b*) weight each problem in scoring the ability of pupils by determining its relative degree of difficulty; (3) this can be done by (*a*) finding the percentage of a large and representative group of pupils which solve each problem correctly; (*b*) assuming that algebraic abilities are distributed in the general first-year high-school population in accordance with some known distribution curve.

Working on these hypotheses and principles, lists of verbal problems (totaling 51 in all) were drawn up covering the principal types of subject-matter named above. As a result of giving the 1915 tests, problems of widely varying degrees of difficulty were

Digitized by Google

included. These problems were then worked by 1,295 pupils, distributed throughout 26 school systems, 17 of which also worked the 11 formal tests. As a result of this testing there was determined the percentage of the group that worked each problem correctly. In order then to determine the relative difficulty of each problem, the assumption was made that algebraic ability is distributed fairly closely in accordance with the "normal" probability curve. (Intellectual abilities in the elementary school have been shown to follow this distribution rather closely. We recognize the possible existence of many factors which tend to make the secondary-school curve skewed to the high end of the scale. Almost nothing is actually known of the amount and direction of their influences, however. The best "practical guess" that can be made at the present time as to the distribution of scholastic abilities is that it corresponds closely enough to the curve of error to warrant using the well-worked-out properties of that curve in our design.)

Let Diagram I represent the distribution of algebraic abilities in the pupils represented by our 27 school systems. The base line then represents a "scale of algebraic difficulty" ranging, let us say, from nearly 0 ability to nearly perfect or 100 per cent ability. The area between the curve and the base line represents the number of pupils in our entire group. If we divide the base line into any number of parts and erect upright lines at the points representing these parts we could determine, from the properties of the normal curve, the number of pupils that ought to be found between these distances in the base line.

In the same way we could determine what percentage of our group of pupils should be found distributed between the zero point on the base line and any other point. Since the normal curve has the property that it actually meets the base line only at infinity we are forced to set our 0 and 100 points arbitrarily by deciding how large a percentage of the entire group we may drop off at both ends of the base line.

Taking as our unit of measurement on the base line, sigma, the "standard deviation" of the distribution (indicated graphically on Diagram I), and laying it off 2.5 times each way from the midpoint of the curve, gives us 5 divisions (which may be conveniently

Digitized by Google

divided into 10 divisions corresponding "practically" to our public-school marking system). In doing this we are arbitrary to the extent of neglecting only 0.62 of 1 per cent of our pupils at each end of the base line. If this 0.62 of 1 per cent is thrown into the

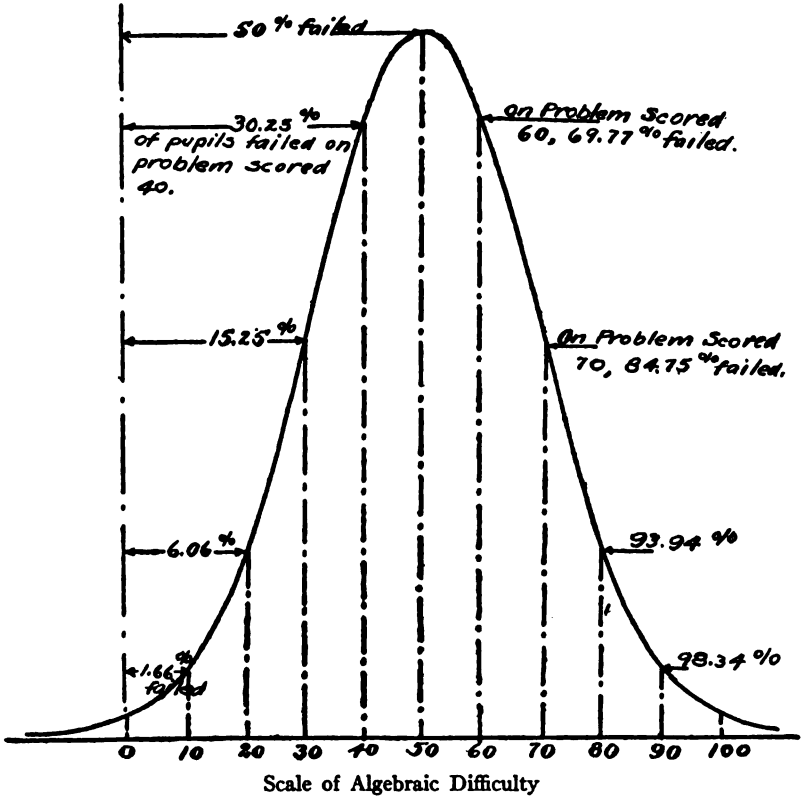

50 % failed
30.25 % of pupils failed on problem scored 40.
On Problem Scored 60, 69.77 % failed.
15.25 %
On Problem Scored 70, 84.75 % failed.
6.06 %
93.94 %
1.66 % failed
98.34 %
0 10 20 30 40 50 60 70 80 90 100
Scale of Algebraic Difficulty

DIAGRAM 1.—Distances on the base line represent, to scale, relative difficulty of problems. Area under the curve represents total number of pupils that were tested for ability to translate verbal problems. 0 and 100 points set arbitrarily at $2.5\times\sigma$ from the mean. Mean is set arbitrarily at 50. Area of the curve between 0 and any point on base line represents percentage of pupils who failed the problem placed at that point.

middle of the curve where the individuals are more closely grouped, it is a negligible factor. Calling the point 2.5×sigma from the mid-point 0, and setting the successive points 10, 20, 30, etc., to 100, we now have a practical working "scale of algebraic difficulty"

Digitized by Google

over the successive points of which the corresponding percentages of our pupils may be indicated. Doing this, we see in Diagram I the proportions of our group of pupils that correspond to various degrees of difficulty on the base line. Thus a problem which is failed by 96.6 per cent of the group falls at the point marked 85; that failed by 84.8 per cent is scored 70, etc., throughout the list. To enable us to mark in an accurate way, a table has been computed in which the base line has been divided into 500 parts.

Verbal list A is printed herewith as representative of the scoring of the 51 problems that have been worked by our entire group of pupils. Each of the 51 problems has been scored for difficulty.[1]

The problems in each list range from very easy to very difficult by approximately equal steps. They are scored on an absolute percentile scale from 25 to 85. The outstanding deficiency is found to be: no problems were included in our list of 51 harder than 85 on this scale (assuming a normal distribution of ability) or easier than 25. The problems at the low end of the scale were estimated incorrectly to be so easy to solve that all pupils would be able to work them. It was found that no problem showed less than 10 per cent of failures and no problem showed less than 3 per cent of successes. The committee is now initiating a thoroughgoing attempt to have large numbers of pupils solve several hundred problems. From these solutions we shall be able to extend the present list and add many more.

When the standardizing of verbal problems is complete, teachers may use such material very easily in a thoroughly practical way. For example, a teacher may, at any time make up an "examination" of translation problems by selecting one or more problems from each "weight," 25, 30, 35, etc., or from "weights" particular degrees of difficulty. She can facilitate her own testing by selecting problems in such a way that the total maximum score is, say, 500 or 1,000—easily reduced to a percentage basis. It must be remembered in all this work that we are testing here *the results of one year's training in algebra*. There must be further detailed experimentation before the comparability of scores obtained *during* the year with those obtained at the end of the year will be established.

[1] Complete lists of verbal problems may be secured from H. O. Rugg, School of Education, the University of Chicago.

Digitized by Google

STANDARDIZED TESTS IN FIRST-YEAR ALGEBRA (VERBAL PROBLEMS)

Rugg and Clark

(Graded on an absolute scale of difficulty from 0 to 100, in accordance with two assumptions: (1) among first-year high-school students the distribution of algebraic ability approximates the "normal" probability curve; (2) the difficulty of problems varies as the percentage of pupils able to solve the problems correctly, superimposed on the base line of this curve.)

Score	VERBAL LIST A
85	A train running from Chicago to Denver at average speed of 40 miles an hour, takes 3 hours longer to make the run than one running at 45 miles an hour. What is the distance from Chicago to Denver?
80	If a cistern can be filled by one pipe in x minutes and emptied by another in $x+5$ minutes, what part of the cisternful runs in one minute if both pipes are open?
75	Find two numbers whose sum is 51, such that if the greater is divided by their difference, the quotient is $3\frac{1}{2}$.
70	Twice the width of the Pennsylvania station in New York exceeds its length by 80 feet. 4 times the length exceeds the perimeter by 700 feet. Find the dimensions.
65	If a boy $4\frac{3}{4}$ feet tall casts a shadow $4\frac{1}{2}$ feet long at the same time that a school building casts a shadow $57\frac{1}{2}$ feet long, how high is the school building?
60	A father 54 years old has a son aged 9 years. In how many years will the age of the father be just 4 times that of the son?
55	Two boys play at teeter. One weighs 100 lbs. and sits 6 feet from the point of support. The other weighs 120 lbs. How far from the point of support must he sit in order to make the board balance?
50	What number has the property that when multiplied by $\frac{1}{4}$, the result is greater by 1 than when multiplied by $\frac{1}{5}$?
45	If the width of a rectangle is W increased by 10 and its length L increased by 20, write the equation for its perimeter.
40	8 times a certain number equals 45 diminished by the number. State the equation by which you would find the number.
35	If W and L are the width and length of a rectangle, write the equation for its area in terms of W and L.
30	If you represent a number by x, how will you represent 5 more than 5 times the number?
25	Express the following verbal statement in algebraic form: the square of a side plus five.

[*To be continued in March*]

Digitized by Google

EDUCATIONAL NEWS AND EDITORIAL COMMENT

The Chicago Dinner

Former students and graduates of the University of Chicago who expect to attend the meeting of the Department of Superintendence in Kansas City in February are reminded of the annual dinner which is held at this meeting. The dinner will be given at the Hotel Muehlebach on the evening of Tuesday, February 27, at six o'clock. The price will be $1.50 per plate. Tickets can be secured in advance by writing to Dean W. S. Gray at the School of Education, or tickets will be supplied at the time of the dinner to all who have signified by Tuesday morning their intention of being present.

College Teachers of Education

Kansas City, February 26, 27

Monday Forenoon, February 26—Program I. Hotel Baltimore.

Monday Noon, February 26—Luncheon of the Society, Hotel Baltimore.

Monday Afternoon, February 26—Program II. Hotel Baltimore.

Tuesday Forenoon, February 27—Program III. Hotel Baltimore.

Tuesday Noon, February 27—Luncheon of the Society. Hotel Baltimore.

First Session

General Topic: "Standardization of Courses for the Training of Teachers"

1. "What Should Constitute a Complete Undergraduate Course for a Prospective High-School Teacher? Speaker to be supplied.
2. "Should the Scientific or the Technological Aspects of Education as a Profession Be Most Emphasized? Ernest Horn, State University of Iowa.
3. "Uniform Nomenclature." G. M. Wilson, Iowa State College.
4. "Definiteness as a Means to Uniformity in Education Terminology." A. Duncan Yocum, University of Pennsylvania.
5. General Discussion.

Digitized by Google

SECOND SESSION

"Ten-Minute Reports of Current Investigations"

1. "Teacher-Training Agencies in the High Schools of Minnesota." L. D. Coffman, University of Minnesota.

2. "The Situation in North Central Territory Concerning the Professional Training of Teachers in High Schools." H. A. Hollister, University of Illinois.

3. "What Are Teachers Colleges, Schools of Education, and Normal Schools Doing Actually to Prepare Their Graduates for Socialization Work in the Schools? H. D. Sheldon, University of Oregon.

4. "Distribution of Major and Minor Subjects among Candidates for the Teacher's Diploma at the University of Michigan. C. O. Davis, University of Michigan.

5. "Distribution of Grades in School and College." A. Inglis, Harvard University.

6. "The Relation between Mental Age and School Attainments in Backward Children." C. S. Berry, University of Michigan.

7. "Measurement of Reading." M. E. Haggerty, University of Minnesota.

8. "The Experimental Study of Rhythm in Handwriting." F. N. Freeman, University of Chicago.

9. "Rhythm in Handwriting." H. W. Nutt, University of Kansas.

10. "A Study to Determine the Amount of Arithmetic Available in the Case of High-School Graduates Who Have Not Had Arithmetic in the High-School Course." J. A. Drushell, Harris Teachers College.

11. Standardized Tests in First-Year Algebra. H. O. Rugg, School of Education, University of Chicago.

12. Other reports to be supplied.

Wyoming Plan of Military Drill for Chicago Schools

Public announcement is made to the effect that Captain E. Z. Steever, of the United States Army, with a corps of four lieutenants and sixteen sergeants of the regular army, will inaugurate a system of military drill in the high schools of certain cities within the central department of the army. Ten officers are assigned to the twenty-three high schools of Chicago. The so-called "Wyoming plan" is said to have been selected, and approved by the Secretary of War.

The essence of the Wyoming plan is the organization of competitive units in the various schools. Boys are assigned to various scaling units,

Digitized by Google

infantry units, drill units, troop leadership units, field firing units, camp and field units, etc., in such a way that each unit is made up of an equal number of strong, medium, and weak lads. Cadet classes are held as best suits the local school authorities. Up-to-date equipment is furnished by the government, with the exception of uniforms, for which some other provision must be made. Each cadet will have a rifle; skill in handling the weapon will be an essential part of the program. Membership in the military squads is by no means compulsory, each student and his guardians having the privilege of determining whether or not military training shall be undertaken. We suspect that the women who instructed their sixteen-year-old sons to stand at the polls last November and say to every voter, "We don't want to fight; we want to stay at home with our mothers"—that such women will veto the plan for their sons. At least four such boys will be denied, under this assumption, in the sixth ward of Chicago.

This system, which appears very simple on paper, is beset with many petty difficulties. Some of these Captain Steever is experiencing as he looks over the ground in Chicago. Who will provide uniforms? How will the drill be adjusted with the high-school program? What about rifles, firing ranges, and the like? Captain Steever has taken the firm and sensible position that military drill without guns is sentimental and senseless. What about a system of cadet officers among high-school lads? The commandant is said to favor a plan of "cadet leadership" as opposed to cadet officers. Instead of captains, colonels, lieutenants, there is proposed for Chicago units the titles of platoon, company, and battalion "chiefs," like chiefs of the departments of a railway system.

More Serious Difficulties of Military Drill

But the difficulties just mentioned are insignificant compared with others, fundamental and almost insuperable, in any scheme of voluntary drill. Anyone who is familiar with the cadet system as carried out in state universities knows the general sentiment among the rank and file of students—"It's all right for the officers, but it is a hard, thankless job for the privates in the rear rank." This feeling is expressed with various shades of emphasis. And military drill, if it is to amount to anything, must be more than a light education in gentlemanly gymnastics. It is hard and serious work. Setting-up exercises require long and sustained attention by men whose hearts are in the work. But we find that most of the university battalions have discarded all but a mere sham and pretense at setting-up exercises. When they are carried out

Digitized by Google

the cadets loaf through them in a slipshod manner. The manual of arms and company maneuvers are more easily supervised and are generally carried out with credit. But the truth is that compulsory drill even in the universities is looked on as a bore, a job to be got through as quickly and as easily as possible. Young men resent the airs often assumed by cadet officers on the field; off the field such airs would be rewarded by a ducking in the river. Military balls are not popular with those college boys who have to attend in a private's uniform.

It may be thought that the Wyoming plan avoids both of these difficulties, because it is voluntary, and calls for chiefs, not officers. However, the elective system may leave out the very boys, big strapping fellows, who ought to be drilled if the scheme has any military purpose; it may leave out little anaemic chaps who ought to be drilled if the purpose is physical training. Moreover, when once in, and the glamor has passed, many boys will elect to change their minds and drop out, if allowed. If not, they will make life miserable for cadet officers. The army officer and the school officials will have their hands full in maintaining discipline. If compelled to remain against their will, the lads may become slackers. In the absence of any real compulsion many cases of this kind are bound to occur.

Again, it appears ridiculous to abolish military terms for officers. To call them chiefs sounds like the organization of a police force. Moreover, the change of name will not touch the real difficulty, the heart of which lies here: boy A, by painstaking industry, has under military promotions, become an officer. Boys B, C, and D, who are better students, stronger athletes, or from richer families, and know it, begin to sneer, sulk in their work, or insult the young officer. This result cannot be avoided by a mere change of name.

WHAT MUST BE DONE

Military drill if effeminated and sugar-coated is likely to be a great and humiliating failure. The expedition of 100,000 militia to the Mexican border brought these men home disgusted. You cannot make play out of hard work. Discipline means a certain amount of drudgery, slavish attention to detail, rigid obedience to authority. The *School Review* believes that such discipline is valuable and much needed among our high-school boys; so much so, that we welcome an experiment in Chicago, provided it is given any chance to succeed. We believe it has no chance of success, unless from the very beginning the following principles are incorporated:

Digitized by Google

1. Make membership a real privilege, by keeping the companies small; make expulsion a disgrace.

2. Call the option "enlistment," with a sensible application of what that means.

3. Keep authority firmly in the hands of the army officers.

4. Multiply the competitive features, especially interschool firing matches, and competitive drills.

5. Teach seriously the use of firearms, plan summer camps for brief periods.

6. Incorporate credit for graduation on exactly the same basis as in any other elective study.

Credit for Outside Activities

The suggestion that credit toward graduation be allowed for serious and sustained attention to military training, raises the general question as to the advisability of such procedure. High schools all over the country are giving school credits for everything under the sun, from baking the bread and making the beds at home, to private music lessons and Boy-Scout activities. The latest is the experiment of Austin, Texas, with the Boy-Scout work. Credit is allowed on the following conditions:

1. For passing one set of Scout tests above tenderfoot, ¼ credit per term.

2. For each two merit badges passed, ⅓ credit.

3. Upon passing to rank of Eagle Scout 1 unit to be given in addition to other credit gained.

4. Maximum credit for work done exclusive of passing to Eagle Scout must not exceed ½ credit per year.

5. Credits shall not be retroactive and not less than ½ credit shall count toward graduation.

6. All credit must be approved by the Court of Honor and the city superintendent of schools.

7. Recommendations for credit to the Court of Honor must be signed by the chairman of the Troop Committee, the Scoutmaster and the Scout Commissioner.

Progressive schoolmen are decidedly right in their efforts to tie up the work of the school with the home life of pupils and with their outside activities. But there is one caution that must ever be borne in mind. Work for which credit is given ought to be rigorously estimated in terms

Digitized by Google

of time, and of substance, equivalent in amount to the amount, disciplinary value of actual school work. Such an effort appears to have been made in Austin. Certainly the lad who attains the higher merit badges of the Scouts, has had fully the equivalent of a course in physical training lasting the same time. In Austin, too, the wise provision seems to be made that the ultimate decision as to the credits must rest with school authorities. Parents, or even enthusiastic Boy-Scout Leaders might be inclined to recommend credit for pupils who had accomplished merely the form of the requirements, while in reality they have utterly failed in the real substance of them.

The Passing of Blackboards

The year 1817 may be taken roughly as marking the appearance of blackboards in American schools; slate and pencil were devices adopted somewhat earlier. School literature of the first quarter of the eighteenth century contains many references to the former of these devices as a new and untried experiment. For one hundred years slate and blackboard have been considered indispensable in any well-conducted classroom. But the year 1917 may be the beginning of the end for the board, the passing of that device following the disappearance of the slate and pencil by about the same difference of time which marked their beginning. Only the most backward schools today tolerate the slate; and a few of the most progressive are endeavoring to find substitutes for the board.

Extension Work for Teachers in Kansas

A comparatively new form of extension work combining the thoroughness of correspondence study with the inspiration to be gained from group study under the direction of a college instructor is being practiced on a large scale in southeastern Kansas by the State Manual Training Normal School at Pittsburg. On a conservative estimate more than one thousand persons, most of them teachers in active service, have enrolled this fall in some of the numerous courses offered.

This work was organized two years ago. It was only last year, however, that it began to take on large proportions. Twenty-three cities and towns had groups of students meeting for instruction every week or every two weeks. This fall there are thirty-three towns on the list and forty-five classes. Other towns are asking to be placed on it. Each Friday afternoon twelve or fifteen members of the faculty pack their grips for a trip over their circuits.

Digitized by Google

The normal school at Kent, Ohio, and the State Teachers' College at Cedar Falls, Iowa, are doing similar work. Several other institutions are working out extension-study systems for teachers.

The faculty of the Manual Normal School could see no reason why the school should not extend itself to the teachers in the field, just as the agricultural colleges all over the country are doing for the farmers. It is the only school in Kansas that furnishes this particular sort of extension-study facilities. The system it has built up within the short space of two years would seem to indicate that the plan will be successfully adopted in many states.

College or high-school credits are allowed for all work. The amount any student may take is strictly limited. Nor is gaining credits a matter of merely attending a lecture weekly. The written work required is, in most courses, the only thing considered in estimating the grades.

The meetings of the study group have for their purpose the taking of the atmosphere of the training school to the teachers in the field with the inspiration that is secured through group effort. The only difference that results in regard to the written work, as compared with the usual correspondence course, is that this work is done more easily because done more intelligently. The instructors outline courses, anticipate difficulties, and comb out tangles. The same amount of written work is required as though the courses were given by correspondence alone.

But one other result accrues from these group meetings, a result to which the instructors attach much value. It is that they are enabled to keep in close and vital touch with conditions in the school's field. They learn the field's needs at first hand. Every week they talk over some of its problems with the teachers who are trying to solve them. They believe that in this way they will make the school a greater force for educational progress by "keeping down to the grass roots," as they say in Kansas.

One of the courses offered is distinctly novel. This is organized especially to meet the needs of a large group of city teachers. The superintendent in the cities of Chanute, Parsons, Coffeyville, and Independence, all cities of the first class, said that they wished their teachers to take work that would keep them abreast of present-day movements in education. A course dealing with the larger problems of modern education and based on a library of twenty volumes is the department's answer. Every teacher in the four cities is required, by ruling of the school boards, to take the course, which has an enrolment of about three hundred.

Digitized by Google

BOOK REVIEWS

How to Use Your Mind: A Psychology of Study. By HARRY D. KITSON, Ph.D. Philadelphia and London: J. B. Lippincott & Co. Pp. 215.

This book aims to solve some of the problems of the college Freshman. The problem of the young person entering college is a serious one. Having on the educational side the task of training one's self prominently in view, the machinery for doing so is completely strange and unfamiliar. The young person entering college for the first time faces the necessity of adjusting himself to an entirely new situation. The methods of presentation of the continuation subjects are quite different from those one is accustomed to. And when there is also a new subject encountered hopeless confusion prevails. College teachers must be planning constantly various schemes of presenting their respective subjects in such a way as to make the material clear and comprehensible to the student. The resourcefulness in formulating these methods of presentation marks the degree of teaching ability.

Assuming that the instructor does his part faithfully and well, there is still much to be desired before the student may be expected to make the most of his time and energy. It is necessary to have the student adopt the proper attitude toward his work; and further, the student should appreciate how to make the best use of his mental capacities. This is the task that Dr. Kitson has set himself in the present book, which is an attempt to give the young students some appreciation of what is involved in study, and the mental processes functioning in this activity.

Dr. Kitson discusses in a very helpful way the psychology of memory, habit, attention, and reasoning with especial reference to study. This material gives the student useful facts which may be immediately applied. The learning process with its plateaus is treated in such a way as to make study less discouraging to the student than it sometimes becomes.

Not only are the purely mental processes emphasized. The book discusses also the conduct of the student in those necessary adjuncts to college training, note-taking and preparations for examinations. The efficient methods of doing both are pointed out and illustrated.

The most efficient study implies satisfactory bodily conditions. This gives Dr. Kitson the cue for a discussion of the bodily processes and paves the way to point out the best means of maintaining physiological conditions which should aid and not hinder the progress of the study engaged in.

The work of Dr. Kitson is well planned and carefully executed. A judicious use of it on the part of the student should result in the minimizing of his difficulties with study.

J. R. K.

Digitized by Google

The Principles of Health Control. By FRANCIS M. WALTERS, A.M., professor of physiology and hygiene, State Normal School, Warrensburg, Mo. Boston: D. C. Heath & Co., 12 mo. Illustrated. $1.20.

The purpose of the book seems to be to present to the student in as clear and simple a manner as possible the fundamental laws of health; first in the individual, then in the community. The watchword is "control."

The introduction (chap. i) discusses the value of health in its largest sense: The basis of efficiency, happiness, personal attractiveness, length of life, and racial vigor.

Chap. ii is a brief review of the physiological processes and their relation to cells. It is summarized as follows: "Since we can determine what substances shall enter the body, govern to some extent the efficiency of the vital organs, determine our adjustment to environment, and regulate the expenditure of our energy we can control . . . . our health."

Chap. iii takes up health variations in the same person and health differences among people, direct and indirect causes of disease. There is a blank at the end for self-examination.

Twelve chapters then follow with detailed instructions in "control," beginning with exercise and posture and closing with the relation of mental and emotional states to the physical condition, and the principles of nerve conservation. He leads up well to the topic or problem of prolonging the period of mental efficiency.

The two chapters on "Germ Fighting" treat in a very suggestive way the defensive and the offensive methods. In no book of a similar character is the process of preparing an antitoxin better treated. The offensive treatment concludes with several paragraphs under "Health Work." The following version of the Golden Rule is given: "As we would that others protect us from their germs, so should we protect them from our germs."

Review exercises and several paragraphs on "health work" follow each chapter. The latter are especially good.

The modern trend of the book is shown in several chapters, but especially so in the last on the larger control through social readjustment. Here eugenics is given its proper attention in a very few words.

This is a book that deserves the consideration of school authorities and people outside of schools. Its author has worked it out to meet the needs in a normal school, but it could equally well adapt itself to the high school, where the regular course in physiology should precede or accompany the course in hygiene.

L. LENORE CONOVER

DEPARTMENT OF BOTANY AND PHYSIOLOGY
MARTINDALE NORMAL SCHOOL
DETROIT

Digitized by Google

The American School. A Study of Secondary Education. By WALTER SWAIN HINCHMAN. New York: Doubleday, Page & Co., 1916. Pp. ii+232.

Mr. Hinchman has devoted the larger portion of his book to the American high school. As he himself says in his introduction, he has attempted to treat a very broad subject in a very limited space. But in his discussion of secondary education in America, he has wisely selected six important phases of that work, and has confined himself to these. Throughout this discussion runs his theme, a most vital and interesting point of view; namely, education by production. This idea is the keynote of the chapter on "Education," and here the theme is outlined. One learns by doing; one learns to think by thinking, and to make things by making them. Doubtless the results during the process will be of no value to the world, but of inestimable account in the development of a human being. The next three chapters might be called a general survey of American schools, including statistics and classifications of courses of study, with a sorting and labeling of teachers—not an inspiring discussion, but possibly a useful background for the succeeding chapters.

Following the picture of schools as they are, comes a discussion of American traits, upon which is based the plan of these schools of tomorrow. In the constructive ideas for the schools are a number of interesting points. One pregnant suggestion is that the course of study shall contain "leads" that shall influence the time spent out of school hours. A practical suggestion is the six-year high school—this course to be divided into the junior and senior schools, each of three years. The curriculum for this school should be planned with the following aims in view: humanism, information, hand training, "leads" toward the pupil's leisure time and his maturity, and above all preparation for life. Interesting courses of study are worked out on this basis. The methods of teaching must be worked out on the same principles, constantly keeping in view the idea of education by production. The chapter on "Athletics" contains nothing particularly new; in brief, it suggests that with "proper supervision, adequate equipment, and the treatment of physical development as a part of the whole education" the pupils may gain both morally and physically.

The last chapter offers a number of ideas for the development of morality and religion. Whether or not they are practical might be proved with the trying out.

On the whole the book contains clear-cut, definite reading. Perhaps the three most suggestive ideas are the responsibility of parents for the schools, and the necessity of "leads" in the school to influence the pupil's outside and later life, and the main theme, "education by production."

IMOGENE K. GILES

GARDEN OF ALLAH, ARIZONA

Digitized by Google

THE SCHOOL REVIEW

A JOURNAL OF SECONDARY EDUCATION

VOLUME XXV MARCH 1917 NUMBER 3

THE WYOMING PLAN OF MILITARY TRAINING FOR THE SCHOOLS

CAPTAIN E. Z. STEEVER, U.S.A.

I shall first present a short historical outline of the Wyoming plan. In 1911 we introduced military training into the public schools of Cheyenne, Wyoming. At the time there was little idea of preparedness in the country and we immediately met with every kind of opposition: opposition on the part of parents who did not want their boys to be soldiers; opposition on the part of women's clubs; opposition on the part of labor unions, who feared a militarism which would be hostile to their interests; opposition on the part of school-teachers; and, most important of all, opposition on the part of the boys, who had their football, basket-ball, and track games, but had no notion whatsoever of national-defense games.

This opposition we answered in four ways:

To the schoolmaster we said: "We are going to develop fine boys for you. We are going to put a little stiffening into the American boy, make him more manly, and make him better material for you to work on educationally."

To the women's clubs, that is, to the mothers of the boys, we said: "We have a moral ideal in this work; we are going to encourage non-smoking and clean-thinking." And we did it.

To the labor unions we said: "We are working for national defense, and we promise you that this organization will have nothing

Digitized by Google

whatever to do with a state or a municipal police force. We are working solely for national defense, and we shall go no farther than that. This will be strictly American, and we shall have no caste idea in this program.

And so my work has been in the line of leadership as opposed to the caste idea. For instance, I am working under the Chicago school board now. In Chicago we have no officers; only leaders. We have no captains, colonels, and brigadier-generals among the boys. Instead, we have platoon, company, battalion, and perhaps regimental leaders, in the same way that on any railroad running into this city there is a chief train-dispatcher and an assistant train-dispatcher. We handle the system entirely without any idea of caste.

To the boys (and, after all, it is most important to make good with Mr. Boy; in the last analysis it is the boy's side of the work that really counts) we say: "You have your football, basket-ball, baseball, and track games. Now, Mr. Boy, why not go ahead with the national-defense game?" And we have given the boys fascinating national-defense games.

Our military instruction has been adapted to the game idea. We have taken the old lockstep, routine work out of military instruction, and we have adapted it to the game. The boy has definite contests to look forward to in all the phases of his instruction. It is high school against high school; we get all the dash and all the efficiency of the football team in our national-defense games. That is a fundamental principle of the Wyoming idea.

Starting with a very few boys in Cheyenne, in the course of a few years we developed the principles of what is now known as the Wyoming plan of military instruction in the secondary schools. Wyoming was, perhaps, the most difficult of all places in which to inaugurate that training. The high-school population is extremely small. The cities are very far apart, railroad communication is not the best. In order to make possible inter-high-school competition we had a most difficult problem to solve. I have not been in Wyoming for many months, and I do not know from first-hand information how the work is progressing. During these two years the boys have had no coach, no director, no one to look out for them; the

Digitized by Google

marvel is that the work has continued without anyone to instruct the boys. How in the world would you carry on Latin, or Greek, or history without a teacher? All the schools employ physical directors to carry along their athletic games; but the boys of Wyoming have managed of themselves to keep military training alive. That is indeed a wonderful test for the system.

I left the Wyoming schools and went to Washington a year ago. There we introduced some of the Wyoming features into the Washington high-school cadet organization, a body of some 27 cadet companies. Washington, D.C., has a high-school cadet organization thirty-five years old. It has existed continuously for thirty-five years. Why? Because it has been on the competitive principle. Heretofore there has been one big competition—the competitive drill at the end of every year. It is the competitive feature that has kept that organization on its feet, and has made it great. I believe that the Washington high schools have furnished more officers to the army, the navy, and the marine corps than any institution outside of the national academies.

We prescribe for the boys uniforms of cadet gray. We want our boys to take pride in their clothing, we desire to inculcate in them habits of neatness and cleanliness. Now a spot or two on dirt-colored khaki makes very little difference, but when uniforms are clean-looking cadet gray, inspected at every drill, it is quite easy to insist that each boy keep his uniform in fine condition, free from spots, grease, and dirt. Cadet gray is becoming; khaki and olive drab are not; the cadet uniform has never been departed from at West Point in favor of the army green or olive drab. A father and mother take greater pride in the lad if they see him coming home in an attractive-looking uniform. Moreover, cadet gray, which blends very well with the landscape, is an admirable field uniform as well as an attractive dress uniform. It is a great combination. Blue is a good dress uniform, but it soils easily and is not well suited for field work. The complete uniform consists of cap, blouse, and pants. Later, the boys will have to provide themselves with gaiters for field work.

In spite of the fact that the Chicago boy (and he is the kind of a boy I was—a poor boy) has to spend fifteen dollars for his uniform,

Digitized by Google

we anticipate that from 30 to 70 per cent of the boys in the different high schools are going to join of their own volition. There are 15,000 boys, roughly speaking, in the Chicago high schools. There are 21 high schools. You see the colossal job we have there. And yet, if uniforms are furnished free, I would promise 10,000 boys or be willing to resign my commission on the failure of my prediction. These boys would be from fourteen to nineteen years of age.

We work upon the following basis: My practical experience is opposed to making the military instruction in the high schools compulsory. Indeed, compulsion is not necessary. We can win Mr. Boy with our delightful national-defense games. I believe in making enlistment in our work elective; a boy can elect this class, or not, just as he sees fit; but once he has elected it for the year he must finish the work as in any elective class. Many subjects in the high-school curriculum are now elective, such as Latin, chemistry, history; we add a military course, attempting to make it as appealing as an attractive game. Thus we take into account boy psychology. Indeed, I believe that if uniforms were furnished free we could easily enroll 90 per cent of the boys. What then seems to be the importance of bothering with the remaining 10 per cent, especially as we might load our companies with spirit of the wrong sort. We desire to avoid the old lockstep spirit, and to substitute the spirit of competition.

Austin High School, Chicago, will have a very high proportion of boys going into the work. We have carefully explained to them that a fifteen-dollar uniform is indispensable. That restriction is a very great pity. A single concrete instance will explain why. Several years ago, in Wyoming, there was a boy who did not come in to take the cadet work, and yet I saw him in the gallery every day when we had drill. He was a fine lad: I knew the type of boy. One day I asked him, "Son, why don't you join the cadet corps?" He shuffled his feet and, boy like, said he did not want to. I pressed him further, and this is what he said: "Well, lieutenant, I have saved up my newspaper-route money to buy a uniform, but my mother is a washerwoman you know. She is sick and she has to have that money; so I can't join the cadets." Of course we were able to provide that boy with a uniform.

Digitized by Google

It is pretty hard for me to go to these Chicago boys and say, "Here, have you got fifteen dollars worth of patriotism?" Because fifteen dollars to the Chicago schoolboy is as big as the whole continent of America is to you.

Next fall we shall consider the question of training the girls. I feel satisfied that our nation is non-militaristic; that we have no desire for conquest of other people's territory. Hence, if war comes, we are going to be on the defensive. That implies that the people who attack us are going to be on the offensive, and that means that our country is going to be invaded. Now, invasion will mean a great movement of population from the seaboard to the central portion of the United States. Various sections of Europe have been invaded during the last two or three years. You, of course, have seen photographs of the refugees. There the women, the young girls, the children, and the men, all went helter-skelter, go-as-you-please, seeking safety and shelter. There was an utter lack of organization. Now, I believe that our high-school girls ought to be taught organization. They ought to be taught squads right and squads left; camp sanitation; how to organize large bodies of women and children, so that in the event of war in this country women can manage women and young girls. American women have a natural executive ability. They can handle masses of women better than the men. I think the men have failed in Europe in providing for the refugees, especially the young women and girls. I am opposed to giving our girls rifles and teaching them how to shoot. If the manhood of this country cannot defend its womanhood, we are in a very, very bad way. But I do see the necessity of this kind of training for girls—organization of units along military lines, camping, camp sanitation. Our girls should be taught the laws of war so that there would be no sniping on the part of the women of a community in the event of invasion. That brings a terrible penalty according to the laws of war.

I want to tell you of the interest on the part of "Mr. Boy" throughout the Middle West. He wants this work, and he wants it very badly. For instance, in Ottawa, Illinois, there are over a hundred boys who come three miles every week to their drill.

Digitized by Google

They start at 7:30 in the morning, before school. That means that the boys have to get up rather early to be able to eat their breakfasts and reach school on time. They have no instructor except a boy who had two weeks at Culver, last year, in the high-school camp; and yet this lad, because of his qualities of leadership and natural-born ability, has held that outfit together and is instructing them. It is a pity they have not a trained instructor and a shame that they have to buy their own uniforms.

I believe that the Wyoming plan has improved discipline in the schools, and has cut down the proportion of juvenile cases in the courts. It has tended to develop the boys physically, to develop them mentally, and to develop their character. In the troop-leadership game we have something very unusual. Here is a game in which boys are called upon to make decisions, and to make them promptly. It is an incomparable means of development to give a boy a problem in which he has to make promptly a decision which in his own mind is very important. Indeed, we think that our boys develop a rather true sense of manhood when we give them a man's game to play. War is a man's game.

It has been said that any attempted military discipline tends to destroy initiative, and that taking any kind of an order from those above him tends to make the boy receptive. That point of view is based upon an ignorance of our Wyoming plan. It rests on the idea that all there is in military training is squads right and squads left, the manual of arms, and the marching movements. We have, in addition thereto, the initiative developer in our map maneuver or troop-leadership game. In this the boys are given certain definite missions to perform; the side which best fulfils its mission is the winner. We are teaching a boy a great civic, as well as a great military, lesson when we teach him to remember his mission. If I, as a boy and as a young man at college, had always remembered my mission, I would be a much better man today.

Then, in a solution of these problems, initiative, resourcefulness, practical ability, are the great, main factors. So far from killing a boy's initiative, this Wyoming plan develops it to the highest degree.

Digitized by Google

PREPARING WHILE WE WAIT

H. L. DURBOROW
Culver, Indiana

With sureness outmeasured only by slowness, our democracy is awaking to the need of military preparedness. A good-natured, lumbering, unprotected giant, composed of a hundred million human parts, is sitting up, rubbing his eyes, and looking around. It is slow work co-ordinating a hundred million brains of graybeards and sucklings into a result-producing organism. Thus far even the graybeards have been so much at variance with one another in their ideas of protection that little save editorial fusillades and oratorical bombardments has arisen to make the country secure from attack.

In considering the matter broadly, it must be honestly admitted that any plan for increasing the army in times of peace, that depends upon voluntary enlistment, with anything like the present inducement for service, is doomed to fail. Military experts affirm this and the evidence of the past confirms it. Diametrically opposed to this is the plan for increasing the army by universal service. But America has developed such democratic hyper-sensitiveness that it is a question if conscription could ever meet with sufficient encouragement, except in war time, to become a popular institution.

Between these extremes manifold plans for building up a national reserve have been conceived, suggested, and relegated into pigeonholes of respectable desuetude. One, however, that has daily been receiving more and more consideration is the introduction of military training into our public schools. Professors with fountain pens for weapons of defense have arrayed arguments against this, ranging from the assertion that "military training destroys initiative," to the statement that "it makes boys hollow-chested." Having been for a number of years intimately connected with the training of boys of high-school age by the military

Digitized by Google

system, I can list with certainty and brevity the points in favor of the plan.

First, from its national aspect, it places at once almost half a million young men under military training. There are today in the high schools of the United States 441,000 boys between the ages of fourteen and twenty receiving academic instruction. About 71,000 each year are sent out prepared for college or business life. With proportionately small additional cost, they could be also prepared to serve their country in case of war with immediate efficiency instead of with inefficiency.

In the second place, military drill conducted in high schools would have the value of being given to students at the period of life when they not only show most interest in things active and challenging, but absorb most readily all forms of instruction. One has only to note the results achieved by Captain E. Z. Steever, U.S.A., in the state of Wyoming, where 90 per cent of the high-school students voluntarily took military training under his leadership, to appreciate the truth of this statement.

In the third place, military training develops a boy physically. Since the majority of students in the modern high school take athletics from the side lines, physical training tends to become a luxury reserved for the few already strong. Military training means physical training for all. And there is no end to the variety. A boy cannot remain subnormal in physique who takes his turn at wall-scaling, setting-up exercises, Butts manual, digging trenches, and participating in skirmish runs.

Again, the average American boy is in tragic need of a discipline which will teach him regard for constituted authority and courteous recognition of those who are his superiors in vision and efficiency. Proverbial American freedom is too large a clover field for an immature mind. Military training has a superb educational value because it presupposes a discipline that fulfils just this need.

Further, military training inculcates the virtues of promptness, alertness, initiative, and self-reliance. To say that it destroys initiative is not confirmed by the facts. No article of a soldier's equipment is so valuable to him as a "good head." An army

Digitized by Google

officer of several campaigns said to me not long ago: "The greatest nuisance in the service is the man who won't use his brain as the occasion requires, but who insists on following orders blindly." Success in modern warfare requires pronounced individual initiative of the man in the trench as well as of the scout in the aeroplane. Closely related to initiative are alertness and self-reliance, qualities so long connected with the soldier that they have become venerable through association.

Another point in favor of establishing military training in schools is that it develops moral qualities of responsibility, cooperation, service, and good citizenship. Few forces put an urge into a boy as readily as a sense of responsibility. Under military training he feels it from the start. Why should anyone pronounce it undesirable to inject an idea of responsibility into the soul of the typical high-school boy? In an address made to the cadets of a certain military academy during his first campaign, President Wilson spoke of the uniform as the symbol of service. "We hear of mothers," he said, "hanging the swords and muskets of their sons on the wall so that they may constantly see them. We do not hear of anyone hanging as ornaments of a household any of the symbols of peace, such as a ledger, a yardstick, a pick, or a shovel. The reason for this is that a man supports himself with these implements, but he is doing a service for someone else when he is using the sword or the rifle in battle: and modern people seem to hold a service they do to help themselves below the things they do to help others." Good citizenship is born of responsibility plus service. It therefore is a by-product of military training that is well administered.

A final point that might be listed in favor of introducing military training into public schools is its adaptability to graduation of instruction in high school and college in the same way that academic work is graded from elementary lessons to courses of an advanced and specialized nature. It might readily begin in the Boy Scout companies now so popular with youngsters in the grades. Then if fundamental military tactics were taught in high schools, such for example as squad and company drill in close and extended order, manual of arms, target practice, scouting, signaling, first

Digitized by Google

aid, wall-scaling, camp-cooking and the like, the colleges could replace their military kindergartens with specialized military training compatible with the academic work of their curricula. This would include artillery drill, map-making, range-finding, target designation, bridge-building, concrete construction, aviation, field maneuvers, and tactical problems of a more complex nature. College students would enter work of this sort with the same zest they manifest in taking up any study in a new and advanced field. A part of the present unpopularity of military drill in colleges is due to its "tin" nature. A university student likes to feel that he is through with elementary and juvenile things. His interest is in doing a man's work.

When it comes to devising ways and means of training high-school students, difficulties naturally arise. But, of course, they are not insurmountable. It took one man just eighteen months to put Wyoming high schools on the military map. Captain Steever began teaching military drill in the Wyoming schools at Cheyenne by developing healthy competition in wall-scaling between squads of boys, extending it later to meets between different schools of the state. A Captain Steever in each state would solve the problem without bothering anybody else, but as yet there are few leaders of just his type.

Recently, however, the War Department has given Captain Steever the opportunity of establishing his system in city high schools of the Middle West which desire to introduce military training. The Chicago schools are to be the chief field of operation, with the Culver Military Academy as the headquarters laboratory. Four lieutenants and sixteen noncommissioned officers have been appointed to assist Captain Steever. Various cities and towns in the district will receive details from this staff, and will co-operate in the extension work.

Aside from army officers detailed by the War Department to schools and colleges, the honor military schools of the country could furnish an extensive corps of graduates able to assist in training high-school boys. The honor schools are those designated by the General Staff as furnishing their students the most efficient military training. Those thus chosen from the essentially military

Digitized by Google

academies of the country in 1916 were: Culver Military Academy, Culver, Indiana; Kemper Military Academy, Boonville, Missouri; Kentucky Military Institute, Lyndon, Kentucky; New Mexico Military Institute, Roswell, New Mexico; New York Military Academy, Cornwall-on-Hudson, New York; Shattuck School, Faribault, Minnesota; St. John's Military Academy, Delafield, Wisconsin; St. John's School, Manlius, New York; College of St. Thomas, St. Paul, Minnesota; Wentworth Military Academy, Lexington, Missouri; Western Military Academy, Alton, Illinois.

One of these above mentioned has already made an effort within the past two years to arouse interest in military training among the high-school students of the central states by conducting two annual camps of military instruction for boys appointed from high schools of the Middle West. Altogether over seven hundred students have attended at nominal cost.

These young men have been held under strict military discipline during the encampments, quartered in tents, and given a course of intensive instruction covering foot movements, manual of arms, squad, company, and battalion drills, outpost and guard duty, first aid, sanitation, signaling, artillery drill, tent-pitching, trench-digging, and the like. The drill-masters have been chosen in every instance from the cadet privates of the academy.

The high-school students have taken to the work with excellent spirit, handling their guns within a short time like seasoned volunteers. In 1915 General Leonard Wood took occasion to make a trip from New York in order to inspect the work of the high-school students. He gave it his hearty approval. The experiment demonstrated the readiness with which high-school students can absorb military instruction, and also showed the ability with which boys who have received a fair amount of training can in turn serve as drill-masters.

There seems to be little question as to the excellence of the material to be found in our public schools, or of the feasibility with which it can be wrought into effective shape. While the national government has shown its approval and willingness to help substantially wherever sufficient interest has been indicated, for some time to come a large part of the work must be done by the

Digitized by Google

individual states, or even by the individual schools in the states. Washington, Boston, Salt Lake City, and Omaha have for some years boasted their high-school battalions. The work once well started and efficiently managed will rapidly gain supporters. But it must be intelligently directed and the training given must be thorough and business-like, for haphazard or half-hearted military instruction is worse than none; it is, in fact, a demoralizing influence from which many of our colleges and semi-military schools have already suffered.

Digitized by Google

MILITARY DRILL IN HIGH SCHOOLS

LEONARD P. AYRES
Russell Sage Foundation

There are three questions that are always in order when it is proposed to establish a new course in the public schools to train workers for a definite trade or vocation. The first is: "What knowledge and skill required in the trade can the school give?" The second is: "What will the new course cost in time and money?" The third question is: "What can we learn about such courses from the experience of localities where they have been in operation?" These three questions are always relevant, whether the new course is for boys or for girls and whether it is designed to reach all of the pupils or only those who choose to enter it.

At the present time courses in military drill are being introduced in the high schools of several cities and their general establishment is being vigorously advocated. It seems the part of wisdom to scrutinize these new courses in the light of the three questions proposed just as we might if their object were any other sort of trade or vocational training.

The first question relates to the practical value of military training in high schools as a form of vocational education having as its purpose the training of boys for the work of the soldier. What is the military value of such training? The public hearings held by the different state commissions on the subject during the past two years have indicated that there exists almost unanimity of opinion on this subject among those who are competent to judge. The fact is that there is probably no other form of vocational training in our public schools yielding results of such meager practical value as those which are contributed by military drill. As commonly conducted in our high schools this work consists mainly in training in the manual of arms and in the close-order formations of the drill hall and parade ground.

Digitized by Google

The essentials of this training can be acquired rapidly and readily. It constitutes the least interesting and least valuable side of a soldier's preparation. It gives little more than the tinsel of soldiering. In the fighting of the Great War minor evolutions in close-order formation have almost disappeared. On the battle front the movements of troops can hardly be called marching and they are conducted mostly in the dark. The rifle is apparently being relegated to a far less important place than it has heretofore occupied, and the manual of arms is said to have almost completely disappeared. All the available evidence goes to show that such drill-hall and parade-ground training as a high-school boy may get in the limited time available for military drill will constitute a most meager contribution toward his training for practical soldiering.

The second question related to cost and here the outstanding fact that emerges when we consider military drill as a form of vocational training is that it is exceedingly expensive. A military rifle costs approximately $20, or a lighter rifle, which may be used for target practice, may be bought for about half that sum. This equipment may be handed on from one set of cadets to the next for a period of years, but will involve constant care and some outlay if it is to be kept in first-class condition. Complete uniforms are worth about $20 per cadet, or if the equipment be reduced to a cap and blouse the expense may be held down to between $6 and $10. This part of the equipment cannot well be handed on from boy to boy.

Drill halls are essentially expensive to build and maintain and are poorly adapted to any other use. Moreover, as most of our high schools are now organized, the buildings and teachers largely remain idle during the school periods while military drill is going on. If city armories are utilized instead of special drill halls, the direct expense will be reduced, but the indirect expense will be increased through the time consumed by the boys in going to and from the armories.

On the basis of the plans now being discussed in the educational press, it seems safe to hazard the guess that military drill in high schools will consume from 5 to 10 per cent of the pupil's time and from 10 to 20 per cent of the money expended for his high-school

Digitized by Google

education during the years that he continues his course in the new subject. These expenditures of time and money are so large that it is well to make sure before incurring them that there is an adequate relationship between the time and money spent and the value of the training purchased.

The third question related to the available experience with this form of education. Here the highly significant fact is that as a nation we have already tried the experiment thoroughly and over a long period of years and it has proved an almost unqualified failure. For many years the reports of the Commissioner of Education carried figures showing the number of boys in public and private high schools enrolled in courses in military drill. While the figures have never been complete, they indicate that for many years approximately 20,000 high-school boys have been pursuing courses in military drill. In general, these have been one-year courses, although this has not been invariably so. More than one-third of these high-school boys have been enrolled in the schools of New England. Apparently the number has not tended to increase much from year to year, but neither has it been diminishing so far as the figures show.

Other figures drawn from the same source indicate that about 30,000 young men are receiving military training in our agricultural and mechanical colleges and about 20,000 men in other colleges, universities, and technical schools. Again, most of these young men have been enrolled for one-year terms. These figures mean that we have turned out from the military courses in our schools something like 70,000 trained boys and men each year. There must be in our population somewhere between half and three-quarters of a million of these cadets who are still young and active men not many years out of school. Many among them undoubtedly received training in the battalions of their high schools and subsequent training in the colleges.

Since there is another large body of men probably aggregating several hundred thousands who have had the training of at least one enlistment in our state militia, it is clear that we must have at the present time in our population something like 1,000,000 young men who have received a military training at least equal to that

Digitized by Google

which it is proposed to furnish through the new courses now being established in our high schools. Our national experiences of the past year have gone far toward demonstrating that these 1,000,000 trained men constitute a negligible military asset to our nation. Almost no competent military man will argue that we should be much better off if their number could be increased to one and a half millions or much worse off if the number who had received such training should be reduced to half a million. In the light of our national experience with this widespread and prolonged experimentation, it does not seem the part of wisdom to set about securing a more general dissemination of this sort of military training among our young men.

Many other more or less serious objections could be raised against the contemplated courses in high-school drill. It may be well to point out that such training will fail to reach a very large part of our young men because they do not attend high school. Again, it is commonly given to boys of the Freshman class, who are too young and too physically immature to do a soldier's work. There is serious objection to any form of vocational education that undertakes to impart manipulative skill in any kind of work which the learner will not undertake for many years after he receives the training. In the present case it is proposed to train the boys at the ages of fourteen, fifteen, and sixteen, whereas even such militaristic nations as France, Germany, and Austria do not admit recruits to active service before the age of twenty.

It is worth noting, moreover, that, while the various countries of the world have experimented with military drill in their schools, they have one after another abandoned it, until, according to the Massachusetts Commission on Military Education, such work is now given in the schools of no countries of the world except Australia and Japan.

Perhaps it is best to rest the case against military drill in high schools on three propositions; military drill is an ineffective form of education for the work of soldiering; it is unreasonably expensive; if we as a nation organize these courses generally in our city high schools we shall inevitably deceive ourselves into feeling that we have thereby taken a truly effective step toward military preparedness.

Digitized by Google

MILITARY TRAINING IN THE HIGH SCHOOL

D. C. BLISS
Superintendent of Schools, Montclair, New Jersey

As a preliminary step to any discussion of the advisability of military training in secondary schools it is necessary to define the term, otherwise the expression will mean one thing to one person and a totally different thing to another. To one it means military drill in the same sense as it is used by the army officer, and includes training with a rifle, manual of arms, and close-order formation. This is a part of the type of training received by the United States regulars, or by the national guard, and has as its fundamental purpose the development of an efficient unit in a fighting machine. Others use the term in a broader sense, meaning such a development of a man's powers as shall make him capable of rendering efficient service to his country, either as a private citizen or, when this general training has been supplemented by technical drill, as an enlisted man. Those who accept the latter definition include in their interpretation of the phrase such a type of physical training as will produce healthy bodies and alert minds, with habits of obedience and self-control. Courage and patriotism are also included as essential products.

As popularly employed, military training is restricted to the first of these two interpretations and suggests that narrow vocational instruction which prepares for the life of the professional soldier. Abundant justification for this definition of the term is found in the current discussion of the question and in the various bills that have been introduced both in state and in national legislature. During the autumn of 1916, the *New York Times* printed a series of letters from the heads of preparatory schools, in which the writers expressed their opinions of the value of preparedness instruction—in the military interpretation of the term—in the various institutions which they represented. Such expressions as these abound: "I desire universal military training which shall begin with the

Digitized by Google

youths of twelve in this land and continue with men until they are well past forty"; "The boy who has had proficient military instruction in school has a vast advantage over the raw recruit"; "As a proper means of national defense the government should provide instruction, uniforms, and arms for all reputable secondary schools willing to take up military training"; "Our children must be trained for defense." These illustrations might be multiplied indefinitely, but more extended quotations are unnecessary to demonstrate that in the minds of the writers military training represents definite preparation for the life of a soldier. A similar interpretation is implied in the text of bills introduced in Congress and in the state legislature. The Chamberlain bill, introduced in the United States Senate, December 13, 1915, contains the same implication: "The training in the second period shall begin on the first day of July in which the persons liable reach the age of fourteen years and shall continue for two years. The training during this period shall be not less than ninety hours each year, ending the thirtieth day of June, and shall include military training with the rifle including gallery practice" (Senate Bill 1695, section 3 [b]). The later provisions of the section provide for a training in the third period, which includes field exercises and target practice. The Slater bill, introduced in the New York Senate, March 13, 1916, provides for military training for boys of from sixteen to nineteen years of age, for not more than 180 minutes a week after school hours, during the school term, and two weeks in camp during the summer vacation. The exact form of the training is not prescribed, but by implication it refers to military training in a narrow sense, since the Welsh bill, introduced at the same session, provides in detail for a scheme of physical training. The Pearson bill, introduced in the New Jersey legislature in 1916, was popularly supposed to provide for a strictly military form of training, and on the basis of this interpretation of its purpose, the opposition based its argument. In view of these and other excerpts which might be quoted, it would seem proper to consider the question of military training in high schools in accordance with the popular and generally accepted meaning of the term.

Several causes have led to the present widespread agitation in favor of military training for high-school boys. Among them are:

Digitized by Google

the unspeakable horrors of the present European war; America's evident lack of adequate preparation to resist aggression directed against the country by any first-class military power; the great wealth of the nation, making her a rich prize for any conqueror; the possibility of aggression on the part of some one of the great powers of the world. Two general plans have been suggested for creating the necessary military force: the first plan proposes to secure it from the adult citizenship of the country. Several methods of carrying out this scheme have been suggested. They include: (*a*) an adequate standing army, (*b*) universal military training for all able-bodied citizens, (*c*) federal militia, (*d*) state militia, (*e*) trained volunteer organizations. The advocates of the second plan believe that the necessary degree of protection can be best secured by military training in the public schools. No layman is competent to pass upon the comparative merits of the different methods for securing from the adult citizens of the country adequate national protection. This is the particular problem for the army expert. The average citizen is interested in the same way that he is interested in all problems of the nation which concern him directly, but he must leave the details to the profession particularly qualified to pass upon the question.

Military training for schoolboys is an entirely different proposition. Here are involved considerations, not only of preparedness, but also of the education of the youth of the country. If it should appear that military training is less effective in developing boys physically and mentally than a type of training broader in its scope, and if it should be established that military drill for schoolboys actually tends to decrease the number and efficiency of those who are willing to serve the country as soldiers, then both those who advocate this form of training and those who oppose it must reach a similar conclusion. The truth of this latter proposition is not capable of mathematical demonstration, though several significant facts appear. The military experts are generally agreed that the type of drill usually found in schoolboy organizations is useless in practical warfare. The manual of arms, wall-scaling, and close-order formations belong to the old order of things. The chief need of the army at the present time is men who are sound physically,

Digitized by Google

capable of enduring the hardships of long marches, trained to care for themselves in camp and in the trenches, and who know how to shoot and to keep their guns in working order. The high-school battalion as it exists today provides little or no training in these essential elements, and there is no reason to suppose that a wider application of the existing plan would change conditions.

The majority of physical-training experts condemn military training as a means of physical development. Dr. Sargent, of Harvard University, says: "It is not an adequate means of a physical training, being not only very limited in its activity, but actually harmful in its effects on boys less than eighteen or twenty years of age. It does not offer sufficient opportunity for the development of the individual's powers of muscles and mental co-ordination and the exercise of judgment under unusual and trying circumstances." Dr. Ehler, of the University of Wisconsin, says: "Military drill is an enthusiasm-killing, contempt-developing treadmill. Preparedness involves, primarily and fundamentally, the possession of vitality, endurance, integrity of structure, and function of every organ, alertness, bodily skill, self-control, hardihood, courage; in other words, the fullest development of the physical, mental, and emotional powers, the result of real physical education. Let us not confound drill with training, nor substitute military drill for physical education." Experience indicates that military drill for schoolboys actually tends to decrease the number of enlistments in the national guard. A captain of a company in the national guard in New York state opposed the formation of a high-school cadet corps on the ground that none of the boys would afterward enlist in the local company. Boston, with compulsory military drill in the high schools for fifty years, has fewer enlistments in the United States army than any other similar population area in the United States. The almost universal testimony from institutions where military drill is one of the requirements for graduation is that the men detest the monotony of the drills and seek to evade the requirements in every possible way. The frequent disbandment of voluntary cadet corps in high schools testifies to the monotony of the work and to its failure to offer any permanent attraction to the young. Military authorities are by no means

Digitized by Google

united in their advocacy of such training for boys of high-school age. General Leonard Wood has recently said: "Personally, I do not believe we should give the training until the year in which the youth becomes nineteen." Baden-Powell declares in an epigrammatic sentence: "Drill the schoolboy and spoil the soldier." If this country is sincerely seeking a state of effective preparedness, it cannot afford to ignore the experience of those European countries which have made military service of adults universal and compulsory. Among those nations in which everything is subordinated to the creation of an effective fighting machine it has in every instance been considered inexpedient and unwise to resort to the military training of high-school boys. Why, then, should our own country seek to impose upon minors, who, as dependents, are unable to refuse such training, a requirement which adult citizens shrink from accepting for themselves? Such a policy would seem fraught with the grave danger of lulling the nation to a sense of false security, leading its citizens to depend for defense upon the superficial training of large numbers while the real substance of preparedness is lacking.

Among other schemes for military training of boys the so-called "Wyoming Plan" has been widely heralded by newspapers and popular magazines. A careful study of this scheme by personal visitation indicates that it is a misnomer to call it a state plan. True, it has received the official sanction of the state legislature by the appropriation of state funds to the extent of $1,000 to assist pupils in the purchase of uniforms, but the appropriation of a small sum of money can hardly be said to constitute a state plan of training. At the present time not more than three hundred boys are enrolled in the various cadet corps, and the greatest diversity exists in the methods employed in the various towns. Such a condition is inevitable when it is understood that in the entire state but one city has a physical director and military instructor. In every other instance the work is carried on by one of the regular teachers who is given a small increase in his regular salary for directing the work. In one city the initiative in establishing a cadet corps was taken by the Board of Education, who directed, as a protest against the extravagance in dress of the high-school

Digitized by Google

pupils, that all students, both boys and girls, should wear uniforms. For the boys this was the naval uniform, and for the girls middy blouses and plain blue skirts. In Wyoming student interest in drills follows the same course as has been shown in other states in which high-school battalions have been formed. In one city, after two years' existence the corps was disbanded because of lack of interest on the part of the pupils, and the rifles were shipped back to Washington. In another, after the squads reached a high degree of proficiency in wall-scaling—which is simply an athletic stunt—the boys became tired of practice, and the work was discontinued. Still another city stresses the manual of arms and platoon drill for the small squad of thirty-five boys who take the work. In this instance most of the boys are unprovided with uniforms. Little evidence was found of any practical results from the appointment of girls as sponsors for the various squads. As a rule, no sponsors have been appointed for the current year, and in the few places where they were found their function seemed to be largely social. Careful inquiry was made among superintendents, principals, and teachers relative to the effect of this form of training upon the moral attitude of the pupils. General agreement was found that the Wyoming boys are true to type, and that the same vigilance on the part of teachers is necessary to prevent smoking and to maintain high standards of moral conduct as is found essential in conducting athletics in the average high school. It is impossible to view with complacency the social cleavage resulting from any scheme of military training restricted in its application to pupils of the secondary school. The best available evidence indicates that a comparatively small proportion of the pupils enrolled complete the high-school course. To impose the burden of national defense in this way upon a small minority is utterly repugnant to the democratic ideal. It is true that many of the boys not in the high school are engaged either in self-support or in the support of dependent relatives, but it is equally true that many a high-school boy is bearing the same burden.

It is difficult to avoid the inference that the supporters of the military training idea see in the school a convenient organization for carrying out the plan, and that consequently they follow the

Digitized by Google

all too common practice of placing the responsibility upon the already overburdened school system. Should it seem wise to make military training compulsory for boys of the high school, if required at all, it should apply to all boys of prescribed ages and physical condition. Unless this is done, plainly any boy who so desires may escape the obligation by the simple expedient of leaving school, and in this way the present tendency to leave school before the completion of the course will be aggravated. The moral virtues of obedience, patriotism, and self-sacrifice are no more desirable for the soldier than for anyone else. They are qualities which should be possessed by every upright, useful citizen, and the school is failing in its manifest duty unless it already has as its fundamental aim the development of these essential virtues.

Digitized by Google

MASSACHUSETTS COMMISSION ON MILITARY EDUCATION

The legislature of Massachusetts appointed a special commission to report on the practicability of providing military training for boys, and of creating a militia reserve. It consisted of: Robert L. Raymond, *Chairman*, lawyer; Walton A. Green, *Secretary*, editor and publisher of *Boston Journal;* Rev. Charles W. Lyons, S.J., president of Boston College; Alexander Meiklejohn, president of Amherst College; J. Frank O'Hare, secretary of Boston Printing Pressmen's Union; William A. Pew, Major-General, M.V.M., retired; William Stopford, Major-General, M.V.M., retired; John J. Sullivan, Brigadier-General, M.V.M., retired; Harold W. Sweet, manufacturer, mayor of Attleboro.

The first two points to be reported on were: (1) The practicability of providing military education for boys between the ages of fourteen and twenty-one for the purpose of securing a proper military training and discipline for the youths of this commonwealth, and for improving their physical, moral, and mental qualities, and providing for the commonwealth an adequate basis for a citizen soldiery; (2) the practicability of providing military training for youths in the public high schools.

By special arrangement with the secretary, the *School Review* is granted permission to reprint portions of the report of this commission.

Military Training in the Schools

"Military training" in the schools, as the words are used by different persons, may mean one or more of several things.

First, military drill, in the sense of training with a musket, manual of arms and close order formation. In a word, an imitation of the sort of training which a young man receives at the armory when he goes into the militia.

Second, physical exercises and physical training which will develop not only the body but the attention and mind of the boy receiving it.

Third, the teaching of true military history, personal hygiene, and camp sanitation.

Digitized by Google

Fourth, the teaching of love of country and willingness to serve it.

The overwhelming weight of opinion from school teachers, military experts, officers of both the regular army and the militia, and the general public is against military drill as defined in the first clause above. It is generally agreed that the military drill which a boy receives in school is of little or no advantage to him from the point of view of practical soldiering. As far as available evidence goes, drill in the schools has had no beneficial effect in promoting enlistments in the militia except in a few isolated localities. For various reasons, it has seemed to create a dislike for soldiering. Military drill in the schools is objected to by many on the ground that boys of school age have not attained sufficient mental maturity to appreciate what war and fighting mean, and are therefore unable to digest ideas which military drill presents to them in concrete form. It is worth noting that military drill as such is given in the schools of no countries of the world except Australia and Japan.

The Commission does not recommend military drill in the schools but is opposed to it.

Physical training which tends to make a boy strong, physically well set up and mentally alert is the proper preparation for the real intensive training necessary to make a soldier, as it is also the proper preparation for civil life. The overwhelming weight of public opinion favors the greater development of physical training in the schools and the standardization and inspection of such training by some central authority.

The Commission recommends the adoption of a systematic plan of physical training in the schools and has drafted legislation providing for that purpose. It believes that the basis of such training should be the system of calisthenics used for many years at West Point under the supervision of Captain Herman J. Koehler, not because that system is particularly military, but because, according to the consensus of expert opinion, it is the best system which can now be adopted.

The Commission also recommends the teaching of personal hygiene, camp sanitation, and the truth about our military history, in the schools.

The Commission also recommends the establishment of training camps for school boys during one month of the summers preceding or following their last year in high or Latin schools. Attendance at such camps should be voluntary and they should be conducted under the joint supervision of the State Board of Education and the Adjutant-General.

The teaching of patriotism or love of country in the schools is something which can hardly be standardized or provided for by legislation. Nevertheless, the Commission feels warranted in expressing the hope that teachers throughout the Commonwealth will feel that it is their duty to inculcate these ideals in the minds of the boys under their charge as a real part of the school life.

The most frequent criticism as to American boys is that they seem to lack a sense of responsibility or of loyalty and duty to something beyond themselves. A spirit of devotion to his country is the finest spirit which a boy can acquire.

Digitized by Google

That spirit is not at all incompatible with the teaching that every endeavor must be made to maintain peace. The militaristic spirit which means blind faith in the doctrine of force is perhaps the most vicious idea which could be instilled in a boy's mind. The military spirit which means a willingness to serve and fight for his country in time of need, which recognizes as abhorrent the point of view which relies on others to perform the service and do the fighting, is a fine and unselfish sentiment which can not be too early instilled into the youthful mind.

There is no need to use the word "military" in this connection. It is offensive to many, and unquestionably means very different things to different people. What the boy should be taught is that nothing can ever make other than glorious and holy the death of one who dies for his country, and that no boy can shift to the shoulders of others a duty to the nation any more than he can a duty to his family or friends.

CHARLES W. ELIOT, PRESIDENT EMERITUS OF HARVARD UNIVERSITY

Military training in the public schools relates usually to the least interesting and least valuable side of a soldier's preparation. The training in the schools should be devoted to methods which are absolutely sound in regard to the equalization of skill as well as the equalization of bodily condition. If we use such exercises in our schools, systematically and in all schools, we would give the boy the best preparation he could receive at that time of life for a soldier's future and it would also give the boys the best preparation the schools can give for service in the industrial army. And the industrial army is just as important for success in war as the army that fights.

I have heard a great deal of talk lately about the importance of a boy's acquiring the habit of implicit obedience: that is the worst habit a boy can acquire after he ceases to be an infant, because it implies the subjection of the boy's own will.

The worst maxim that has ever been used in education is "Break the child's will." The soldier's discipline, as it has been understood in despotic governments of the Orient and of Europe today begins with the breaking of will, the subjection of every man to his superior officer instinctively—on the spot. That is not a good way to train republicans. What we want in the form of discipline in the army is just what we want in industries; it is the co-operative work; it is the sense of comradeship, fellowship, which in sports we call "team-play." That is the discipline a Republic ought to give its children. And the military discipline that has come down to us is something quite different and very inferior for the purpose of educating and training effective human beings.

The military form of discipline is not individualistic enough for the teacher or for the Republican statesman.

I am a believer in the voluntary system of enlistment and, therefore, a voluntary system in training for war and also for peace purposes. I believe

Digitized by Google

that superior efficiency can be obtained under the voluntary system, both in fighting and in industries.

It seems to me there is a very great objection to interfering with the personal liberty of the American citizen. It is because of the personal liberty of the American citizen that this Republic exists.

The chance that we should be called upon to defend this country against European or Oriental attack may fairly be called infinitesimal; and yet when we see what the consequences of successful invasion are under the present barbarous methods of conducting warfare, I think we are justified in putting out insurance money in this respect.

I notice some European countries pay men a portion of what they would earn if they went on in the industries in which they are already interested. That is something the State of Massachusetts could do.

Q. What is your opinion of using the militia in strike and riot duty? A. I suppose that is a very unwilling duty to the militia, but I think it should be used to keep peace.

Q. I did not mean without a substitute—but rather as to the efficacy of the militia for what is more of a police duty. Do you consider the militia equipped by training now for such duty? A. Not nearly so well as the regular army.

Q. Or so well as a constabulary? A. Not so well, certainly, because the regular army and the constabulary in Pennsylvania are all the time in service and enlisted for every day in the year: of course they are much superior.

GEORGE NASMYTH, ESQ., DIRECTOR OF THE WORLD PEACE FOUNDATION

We are all in favor of a reasonable preparedness against war and because we desire that this preparedness shall be adequate, we must protest against the adoption of futile or obsolete methods which experience has shown are likely to defeat the object we have in view. America should make preparations against war which will be really effective, such as the formation of a League to Enforce Peace, the building of submarines and the strengthening of coast fortifications, the abandonment of useless army posts, originally erected to protect the settlers in the west against Indians, and the concentration of the military forces which this would release in larger mobile units in connection with the coast fortifications.

On the other hand, the measures proposed in the resolution authorizing the appointment of this board are futile to achieve the end desired and dangerous because they tend in the opposite direction.

The proposed military training of all boys, while useless from the point of view of real preparedness against war, constitutes a real danger because of its effect in militarizing the minds of the coming generation. The object of the United States at present is to get preparedness without militarism, and the proposed measures are designed to defeat this object.

Digitized by Google

Military education of high school boys between the ages of fourteen and twenty-one is designed to increase militarism in America and is a step toward preparation for war and not against war. I oppose it therefore not only as useless from the point of view of real preparedness, but as a danger to the peace and the democratic institutions of this country.

From the militaristic belief that war is a good thing and is inevitable you get the familiar Bernhardi logical argument. The steps of this chain are (1) since war is inevitable, we must prepare for it; (2) our preparation must be adequate or it is useless; (3) the best defense consists in an attack when your prospective enemy is not so well prepared as you are; (4) it is the duty of a country to declare war at the most favorable opportunity.

Bismarck in his "Reflections and Reminiscences," Chapter XXII, tells us definitely how the Prussian militarists tried to push him into war, how he used this militarist pressure to throw the country into war with Austria in 1866 and with France in 1870, and how he had to resist the powerful militarist pressure toward war in 1867, in 1875 and on other occasions. Bismarck says on page 102, Volume II:

"It is natural that in the staff of the army not only younger active officers, but likewise experienced strategists, should feel the need of turning to account the efficiency of the troops led by them, and their own capacity to lead, and of making them prominent in history. It would be a matter of regret if this effect of the military spirit did not exist in the army; the task of keeping its results within such limits as the nations' need of peace can justly claim is the duty of the political, not the military, heads of the state.

"That at the time of Luxenburg question, during the crisis of 1875, invented by Gortchakoff and France, and even down to the most recent times, the staff and its leaders have allowed themselves to be led astray and to endanger peace, lies in the very spirit of the institution."

The experience of the past year has shown that victory in modern wars is chiefly a matter of ammunition, and I should favor the storing up of millions of rifles, other munitions and supplies instead of the useless and dangerous measures proposed in these resolutions.

Dr. Hugh Cabot

Military training, or training leading toward military efficiency, is at once not only preparation for defense or fighting, but, and far more important, an equipment for the business of living.

We concern ourselves with the training of mind but concern ourselves very little with the training of body, and with the relation between mind and body, called discipline.

As civilization tends to draw people together in large sections, the ability to look after one's self, and all that goes with it, is more and more neglected. It is certainly true that men of two generations ago were better able to look after themselves than the men of today.

Digitized by Google

Men should not fear unknown conditions because they are unknown. I think one sees it strikingly that the city-bred man is afraid of unknown situations.

Teaching boys things they ought to know is not conscription: it is education: part of the business of a democracy.

This military training should be begun in the school. At the age of ten boys should be taken out in the open and taught to look after themselves. If it is undesirable to take time from the curriculum, there is plenty of time in the summer vacations. It will be a thing that will pay perfectly sound dividends in the health of the community and in discipline. I think it is generally admitted to be strikingly true in our educational system that we do not introduce much discipline. There is more discipline in athletic crews and teams than in the educational system. They learn, in athletics, the discipline of obedience, that they have got to do certain things if the game is to go on.

The tendency of our civilization is to gather people together in a big city and take away from them the good that country living has developed. We should provide against this by a system of military training under the control of the State or national government.

Dr. Dudley A. Sargent

Let us consider first what are the fundamental requirements of modern war as regards the men and women of a belligerent country:

(*a*) Health and vigor of its people, and the knowledge of how to maintain it under both favorable and adverse circumstances.

(*b*) Mental acumen and bodily and mental control under trying circumstances.

(*c*) A courageous and generous spirit that will fight for what it believes is right for all it is worth.

The musket is a one-sided implement, too heavy for young boys and inefficient and harmful for older boys.

Recruits of eighteen show physical immaturity which results only too frequently in their ending in the hospital or being discharged as invalids. Recruits of eighteen require two years' special training before they are fit for military training.

The most military nations in the world do not have military drill in their schools, but give military instructions and training only after the boys have reached eighteen or twenty years, and have received years of physical training as a part of their schooling.

A rational system of physical training in the schools and colleges would be of the greatest value in preparing the youth of the country—both boys and girls—for the struggles of both war and peace.

Q. Are you familiar with the West Point military calisthenics? A. Yes.

Digitized by Google

Q. Do you think that is a good form of exercise to have in the schools, without any guns or weapons? A. Excellent. And it has become more excellent since Captain Koehler enlarged upon it.

Q. Speaking practically of our general schools, how much time would be healthful and practical to be allowed physical exercises? A. Half an hour a day at least.

Q. Consecutively? A. Better consecutively.

Q. In the open air? A. Yes, if you can.

Q. If we should have half an hour carefully arranged according to the best possible plan, would that be quite sufficient to develop our boys? A. Yes, it would be surprising to find how much you would get.

Miss A. E. Esilman

We have the unenviable reputation of being the most criminal nation. I think that I have a way to give us the lead in righteousness as well as to insure continual peace.

This country has had a full fling of self-governed youth, with the result that 4,867 young men, from 15 to 25 years old, were imprisoned in 1913 in the State of Massachusetts alone. One thousand eight hundred and thirty-three of them were under 21 years of age, and 175 of these were in for drunkenness.

Penal institutions cost this State over one and two-third millions net in 1913.

You have had the idea advanced here that military training is bad because it requires implicit, immediate obedience. These statistics are of boys who would not obey.

An idle mind is the evil one's workshop.

One reason for recommending military education for boys is because a boy's ideal is a manly man—and soldiers are always men, usually attractive and finely set up as a result of the training.

The idea of compulsory military service is not new. It dates back to 1785 when all able-bodied men in the country were enrolled in the Militia which was to be part of the army. Quite a few things are already compulsory —jury duty, school attendance, taxes, vaccination, and compliance with the Board of Health rules.

You have armories lying idle four or more nights a week—town halls usually idle at night—school halls seldom used. Why not put them to use? A place where big boys could learn men's work.

Substitute manly occupations which are helpful and entertaining for street attractions and penal institutions. A soldier is a respected man among his fellows because he represents authority and power—just what every boy is looking for. Put that power within his reach along educational lines, with good times, and you'll have no more difficulty.

Digitized by Google

The Federal Government should furnish expensive equipment, artillery, aeroplanes, and motor vehicles. A goodly number of lads are sure to find the key to success within those armories—poor, effeminate mothers' darlings as well as those who never saw much wholesome training before.

To make military service voluntary is to invite men to offer themselves as a sacrifice for their more selfish fellows who stay at home and make the necessities of the times their season of profit. If all this stir about preparedness is only to get volunteer enlistments I shall be disappointed. No man should be solicited, no matter how indirectly, to assume such a risk, while others equally able refuse to do their part. The whole proposition is contemptible and men are beginning to realize it.

Wars, riots, and strikes are rich men's quarrels usually. They would be far less frequent if their own heirs had to face the enemy or mob. None should be excused who are able to serve, the rich least of all for they have most at stake. The army surgeon should be the judge of their condition.

Voluntary enlistment would never give us enough to insure peace without worry.

If we train all our boys, in case of actual war only men between 21 and 30 need ever serve, for that would give us an army of over 10 millions.

Gentlemen: You are entrusted with the consideration of a plan for public defense. Earnestly I entreat you to consider the boys as future citizens and soldiers, and to make a plan that even our poorer communities can follow and the United States Government copy—something simple, strong and practical, that will be permanent, to make "A citizenry trained and accustomed to arms," as President Wilson expressed it.

HERBERT F. HARTWELL, CAPTAIN HEADQUARTERS STAFF,
2D REGIMENT, M.V.M.

Again, if I have read the signs aright, among schoolmen there is little support, some passive receptivity and considerable active opposition to the idea of military drill in the schools, and I consider that they have some good reasons for their opinions. My own experiences as a high school cadet in Massachusetts for four years may not have any value for, or bearing on, the new idea of military training, so I will merely say that my subsequent experience as a national guardsman has taught me that, aside from how to march and to handle the rifle, it was of no practical value.

There are, I think, certain elements of military training, or certain branches of the soldier's profession that could with great value be introduced into high school work. For example, wireless, wig-wag, and other signal methods, with the necessary learning of the Morse code, field sanitation and personal hygiene, the mathematics of engineer and artillery problems, and the manipulation of engineer, signal and artillery corps instruments. Moreover, since the bulk of a field army is composed of infantry, install rifle ranges, issue a

Digitized by Google

certain number of rounds of .22 caliber ammunition to each boy, and give him instruction in shooting. Instruction in the use and caution against the misuse of firearms is vital to every community.

There is a certain definiteness of achievement in military matters which does not of necessity have to be put to the blood test to show efficiency. To secure that which we need is not a certain amount of training in the high school of an hour or so a week of perfunctory work, but a "round up" of all young men of, say, 18 years of age and physically fit, in a camp for drill and instruction for the period of a month in the summer for intensive drill eight hours a day. By so doing we will have the malingerer where he will be under discipline, the law will play no favorites, and those in charge will be answerable to their fellow citizens, to their wives and their children for an efficient protective force in time of the nation's greatest need.

Digitized by Google

BRIEF SUMMARIES OF PRINCIPAL MILITARY SYSTEMS, BY THE MASSACHUSETTS COMMISSION ON MILITARY TRAINING

The Commission believes the following brief popular summaries of the military systems of other leading countries may be of interest. They are, of course, based on conditions existing before the Great War.

SWISS SYSTEM

Compulsory universal service.—The Swiss Constitution provides that every man is liable to perform military duty between the ages of 20 to 48. (Legal liability begins at 17, but service at 20.)

Exemptions.—(*a*) Federal officials; (*b*) employees of postal and telegraph service; (*c*) officials of hospitals and prisons; (*d*) police; (*e*) clergymen; (*f*) teachers.

Divisions of service.—The Army is divided into three classes:

Élite	Men from 20 to 32
Landwehr	Men from 32 to 40
Landstrum	Men from 40 to 48

Élite.—At 20 the young Swiss reports for admittance to service and is examined by local commissions. Examinations are both physical and mental, the former being very severe. About 50 per cent of those reporting are rejected. If the candidate passes he is given his soldier's register in which there will be recorded his entire military history. He is also issued uniform, equipment, and rifle. These he takes home and keeps during his whole period of service, being responsible for them and their condition under heavy penalties.

The first year's course of instruction is at designated training places, and is called a recruit school. Eight hours work per day, Sundays excepted, are required. Instruction is in school of the soldier, company and battalion, target practice, care of arms, cooking and hygiene. Recruits during their first year serve—

Infantry, Engineers and Foot Artillery, 65 days.

Artillery and Garrison, 75 days.

Cavalry, 90 days.

After first year soldiers in Élite (other than Cavalry) are called out seven times, for a service lasting from 11 to 14 days.

Cavalry serve only ten years, *i.e.*, to age of 30 in the Élite; but are called out eight times for service of 11 days each.

Training periods after the recruit course are devoted chiefly to tactical maneuvers in large bodies. Division operates against division, starting at widely separated points.

Digitized by Google

At all times the training is very practical. Little attention is paid to mathematical precision in marching. Field work, with long marches in full kit, is the rule. Average march, 15 to 19 miles.

Landwehr.—Called out only once for service of 11 days.

Landsturm.—Called out only in case of war.

School instruction.—Every boy must attend school until 15. From 10 to 15 boy is given athletic and gymnastic exercises but no distinctive military instruction. Object is to turn out vigorous and agile men with minds impressed with ideas of duty and honor. This instruction is controlled by the cantons.

Voluntary organizations.—There are voluntary military organizations for boys known as "Cadet Corps." Rifle-shooting is a national sport as baseball is here. There are many rifle clubs. Some are for boys from 11 to 20. In 1914 about 13,000 boys were members of these clubs. Rifle clubs for adults are under federal control and encouragement and have a membership of over 213,000.

Strength of army.—Switzerland can mobilize a trained and equipped army of 220,000 soldiers in twenty-four hours. Behind this first line is a reserve of 270,000 men, of whom 70,000 are armed.

Military tax.—Every Swiss citizen at home or abroad between the ages of 20 and 44, who for any reason is not accepted and enrolled in the active or reserve armies, is obliged to pay a military tax. This tax is of three kinds:

1. Military poll tax, $1.20.

2. Military property tax of .15 per cent of assessed value of property in excess of $200.

3. Military income tax of 1.5 per cent on income.

This tax is in addition to all other taxes; the assessments are rigorously made and every penny is exacted.

AUSTRALIAN SYSTEM

Compulsory universal service.—The Australian "Defence Act" makes military training and service compulsory upon all male British subjects between the ages of 12 and 26.

Exemptions.—Temporary exemptions are granted to: (*a*) school teachers qualified as instructors of junior cadets (see *infra*); (*b*) members of regular army and navy; (*c*) residents of sparsely settled districts; (*d*) residents 5 miles from training places; (*e*) theological students; (*f*) those physically unfit.

Permanent disqualification exists against: (*a*) those convicted of crime; (*b*) those of bad moral character.

Divisions of service.

Junior Cadets, ... Age 12 to 14
Senior Cadets, ... Age 14 to 18
Citizen Forces, ... Age 18 to 26

Digitized by Google

Junior cadets.—Education is compulsory up to 14 years in most of the Australian states and shortly will become so in all of them. Three-fourths of those liable to junior cadet training are in the State Schools and the rest in private schools. Consequently the schools supply this training with supervision from the military authorities.

The course covers 120 hours per annum and consists of: (*a*) at least fifteen minutes of general physical training; (*b*) infantry squad drill; (*c*) any two of the following: (1) miniature rifle shooting; (2) swimming; (3) running games; (4) first aid.

No uniform is required or allowed. The object of this training is simply to improve the physique of the boys, and medical examination is intended only to exclude those who would be injured by the work. In 1913, 55,850 junior cadets were in training.

Senior cadets.—All boys must be registered in January of the year in which they become 14. In July of that year, after a rigid medical examination at which about 10 per cent are rejected, they receive uniforms, "record books," and arms (all of which they use only when on duty), and are told off to companies. They are now a part of the army and liable to any service required. For the convenience of schools having 60 senior cadets or over and a qualified instructor, the organization of special units at such schools is permitted.

The course covers 4 whole days, 12 half-days and 24 night drills annually. At the end of each year a military board examines each cadet and passes him as "effective" or requires an extra year's service if he is "non-effective." In 1911 there were 92 battalions of senior cadets, with 922 companies and 89,184 officers and cadets. (N.B. The "battalion," as applied to senior cadets, is a geographical and not a numerical division.)

Citizen forces.—At 18 years all senior cadets receive a severe medical examination for the citizen forces, at which over 30 per cent are generally rejected. Each soldier is armed exactly as in the British army.

The course covers 7 years, in each of which there must be 16 full days' service (8 of which must be in camps of continuous training) and 1 year wherein attendance is required only at registration or muster parade. (N.B. Artillerymen and engineers must serve 25 days annually for the first 7 years, 17 of which days must be spent in camp.)

All promotion is by competitive examination based on merit and is from the ranks. In 1913 the citizen forces were 45,000 men and ultimately will number 152,000. Discipline is carried out by fines and no defaulter can ever obtain government employment.

Reserves.—There is no reserve force, but on completing the twenty-sixth year, the men are expected to join the rifle clubs, which receive government encouragement.

Regular army force.—The regular army force in 1911 consisted of 2,003 officers and men.

Digitized by Google

FRENCH SYSTEM

Compulsory universal service.—All men are compelled to serve 3 years in active military service. Although Frenchmen need spend only 3 years in barracks they are all subject to service from the age of 20 to the age of 48—thus remaining at the disposal of the military authorities for twenty-eight years. Only the infirm are excused.

The active army.—The active army is composed of soldiers accomplishing their three years of compulsory service.

Every year, from the first to the fifteenth of January, census tables are drawn up by the municipalities. On these tables are inscribed the names of all those young men who have attained the age of 20 during the year, and who are domiciled in the commune. These young men are then summoned to appear, in the simplest clothing, before a special council, which is known as the council of revision, and which meets at the chief town in the district; it is presided over by the prefect, and comprises a general, a councillor-general, an arrondissement councillor, and a councillor of the prefecture. A military surgeon examines the young men, and the council decides whether they are fit for service or whether they should be "adjourned." All those incorporated are afterwards inscribed on a special register—when they receive a military *livret*, or memorandum book, which they must produce whenever required.

Distribution of recruits.—Recruits may be drafted to any garrison; in other words, recruiting is not local or territorial, but national; a young man born at Marseilles may be sent, for example, to Dunkirk.

The recruiting of the reserves and the territorial army is always regional, with a view to rapidity of mobilization.

Special engagements.—Men more than 18 and less than 32 years of age, who are neither married nor widowers with children, may, on condition that they have never been condemned by the courts, engage to serve for four or five years. Re-engagements, having the great advantage of strengthening the staff of under officers, are encouraged by premiums and by higher pay. The ex-under officers re-engaged have the right also to pensions in proportion and to civil employments.

Special enlistments, and postponement of service.—Young men who contract to serve for more than three years may join before the age of 20 under certain conditions, and those who are students or engaged in some industrial, agricultural, or commercial exploitation may obtain, upon the advice of the council of revision, a postponement of service, renewable in some cases until the age of 25.

National colleges.—Young men admitted to the entrance examinations in certain national schools—the Normal Superior College, the Central College of Arts and Manufactures, the School of Forestry, the School of Bridges and Highways, and the School of Mines—may receive there a special military training, and are prepared for the grade of sub-lieutenant of reserves. If they

Digitized by Google

pass the necessary examinations for this grade, they need serve only one year as soldiers and may complete their time as officers. Young men admitted to the Military School of Saint-Cyr or the Polytechnique School of Engineers must themselves pass a year in barracks. All young Frenchmen are subject to this common rule.

In the barracks the soldiers receive a course of thorough physical training, in addition to which is complete instruction in the whole duty of the soldier, both theoretical and practical.

Divisions of service.—The term of service in the ranks of the first line, or "active" army, is, as has been said, three years, and the men join at the age of 20. The soldier completing this time then belongs to the reserve for eleven years; after which he passes to the "territorial" army for seven years; finally completing his service with seven years in the "territorial" reserve. Men of the reserve of the active army are called up for training and maneuvers twice in their period of reserve service, for four weeks on each occasion. The men of the "territorial" army have only one training of two weeks, and those of the "territorial" reserve no periodical training.

Mobilization.—Owing to the length of the reserve service the number of reservists per battalion is very large (2,000 or more). On mobilization, therefore, the reserve not only brings its unit to war strength, but every battalion and regiment forms a corresponding reserve unit, and there is still a certain surplus left for the depôt. In peace time the troops on the eastern frontier have a considerably higher establishment than the remainder. The mobilized strength of a normal army corps would be nearly 33,000 combatants. The strength of a cavalry division of six regiments would be about 4,700 combatants.

Strength of the Metropolitan and Colonial Armies of France.—The Metropolitan Army has 736,164 men in France, and 82,368 men in Algeria and Tunis —making a total of 818,532 men.

The Colonial Army has 28,000 men in France, and 59,000 men in the French colonies—making a total of 87,000 men. The general total, therefore on a normal footing is about 900,000.

GERMAN SYSTEM

Compulsory universal service.—The whole of the German military system is dominated by the principle of universal service according to which every male subject is liable to military service from his 17th to his 45th year. Service actually begins at 20.

Exemptions.—The number of exemptions depends upon the budget granted to the army for the period concerned. The budget has never allowed a full application of the principle in times of peace. Those afflicted with physical defects, however slight, are certain of exemption, also only sons indispensable to their family, and usually theological students. All classes of

Digitized by Google

offenders against the law are excluded from service while under court suspension of their civil honor.

Types of recruits.—From the standpoint of military training the men of the ranks are divided into two groups, those who have completed an education equal roughly to our high-school course, i.e., through the seventh year of the Gymnasium or Realschule, and those who have not.

Regular recruits.—The latter must serve two years with the colors if enlisted with the infantry, three years if with the cavalry or horse artillery. These years are spent in severe military drill. The men are housed in the government barracks, are clothed and fed and allowed a small pay of about 6 cents a day. Small maneuvers are frequently held, but every fall a grand maneuver of eight weeks under the most complete war conditions possible is engaged in. Aside from the physical drill schools are conducted for the men by the lieutenants to give instruction in the most elementary military science, history and geography.

Reserve.—After the two or three years with the colors the men are assigned to the reserve for five or four years. During this term they are called upon to take part in two grand fall maneuvers of eight weeks each.

Landwehr, first ban.—For the next five years they are attached to the first ban of the Landwehr, during which time they undergo two trainings of from one to two weeks each. The cavalry receives no additional training after leaving the reserve.

Second ban.—After five years with the first ban the men are enrolled with the second ban of the Landwehr up to the completion of the 39th year; but no training is demanded during this time.

Landsturm.—After this up to 45 they compose the first ban of the Landsturm. The second ban of the Landsturm is made up of untrained men between the ages of 39 and 45. The Landsturm receives no training and is the last to be called out in time of war, and then only provided the war is a defensive one.

The actual training of the ordinary private then consists of two full years with the colors, twice eight weeks with the reserve, and twice one to two weeks during the next five years with the first ban of the Landwehr.

Noncommissioned officers.—In times of peace promotions from the ranks are made only to all ranks of noncommissioned officers, ranging from the lance-corporal to the sergeant-major. Rarely more than the first promotion is made during the first two years with the colors. Those who have completed the two years with an honorable record have the option of remaining with the colors as corporals. Upon completion of twelve years of honorable service the state provides to retiring noncommissioned officers employment in its civil service followed by old age pensions.

One-year volunteers.—Those who have completed the so-called high-school education mentioned above may enter the army as one-year volunteers. This shortens the service with the colors by one year and exempts from most

Digitized by Google

barrack duty. In return, volunteers must supply their own lodging, board, and uniforms. Though the training in most respects is identical with that of the ordinary private, due allowance is made for the higher intellect of this class. Promotion to lance-corporal is made on the basis of record at the end of the first half-year and to corporal after the fall maneuvers. Such corporals then have the option of serving in the very next grand maneuvers, at the end of which, if their record is still favorable, they are admitted to an examination on the basis of which they are recommended to their local corps of officers for promotion to lieutenants of the reserve. In time of war this class furnishes the bulk of officers for the reserve and the Landwehr. It is interesting to note that a very large percentage of one-year volunteers choose to serve during their first year at the university with a regiment stationed in a university town. Thus they manage to satisfy not only the exacting military requirements and the requirements of the first university year, which may be made very light, but also the rather heavy duties imposed upon the first year men by the fraternities at a German university. The ratio of the one-year volunteer to the ordinary private seems to be as high as 1 to 25.

Ersatz.—All able-bodied men who have not been accepted by the recruiting officers are assigned to the "Ersatz Reserve," a substitute reserve, to which they belong up to the end of the 39th year. After that up to 45 they are enrolled in the second ban of the Landsturm. These men are drafted and trained in time of war. With an especially favorable army budget they sometimes receive short training in times of peace. This body is variously estimated, the lowest figure being about half a million able-bodied men.

Officers. Types of applications.—Those who seek regular commissions in the army either enter a cadet school at a very early age, usually at 10 or 12, or join the ranks as "avantageurs" after having passed the one-year volunteer examination or the university matriculation examination, or, in many cases, as late as after one or two years at the university.

Cadet schools.—The training at the cadet schools, of which there are eleven, is severe and under an excellent staff of instructors, but is not very broad. It is strictly a professional schooling. Military drill and the rudiments of military science are carefully ground into the pupils, and mathematics, drawing, history and geography are taught from a military standpoint. Much emphasis is also put upon Latin and the principal modern languages. At these schools the sons of deceased or needy army officers or other servants of the State are maintained wholly at the expense of the government. Others pay a sum of less than $300 a year. Upon graduation after a seven-year course the cadet is appointed to serve as ensign with the colors.

War schools.—After a year of such service the brighter men are sent to the Kriegsschule, war school, while the rest are made to spend an extra year with the colors. To this school are also sent the "avantageurs" after having served one, rarely two, years with the colors as volunteers. Here the higher branches of military science are taught and the command of modern languages

Digitized by Google

strengthened. The course is for thirty-five weeks only and all the expenses are defrayed by the State. After graduation and upon examination candidates are appointed lieutenants and assigned to some regiment.

Selected cadets.—Cadets who have especially distinguished themselves at the cadet schools are exempted from service with the colors. Instead they remain at the school an extra year ("Selecta"), during which they receive instruction similar to that at the war school and are then admitted to an examination entitling them to a lieutenant's commission. "Avantageurs" who have spent at least one year at the university also need not attend the war school. A six-months course of study for the second half of their year with the colors is outlined for them to prepare them for the lieutenant's examination.

Promotion.—Promotion is extremely slow if made simply upon completion of the term of service in each rank prescribed by the code. Each fall maneuver, however, gives the ambitious young officer a chance to distinguish himself before his superiors. At regular intervals special problems as tests of intellectual efficiency are assigned to all officers up to the rank of captain, the solution of which are sent to the officers of the General Staff and often made the bases of promotion.

War academy.—In addition to this, young officers have the option of applying for admission to the war academy at Berlin. The examination required for admission is very severe. The school is conducted by the General Staff, the Kaiser himself taking a very active part in its management. The instruction centers about the theory and practice of military strategy and tactics, the principal purpose of the school seemingly being the discovery of those most highly gifted along these lines. The average man is generally dismissed after a year or two and only the most promising candidate retained for the full three-year course. The graduates are considered likely candidates for positions on the General Staff, in the war ministry of the State, or for all the higher commands in the army.

General staff.—For a time at least the successful graduate of the war academy is appointed to the General Staff. This body, which has complete control over the army and is responsible to the Kaiser alone (for there is no imperial war ministry in Germany), differs from similar organizations in other countries in that it continually changes its constituency. Wholly at the discretion of the Chief of Staff officers are chosen and retained for shorter or longer periods, ranging from one to fifteen years or longer.

Functions.—The duties of the General Staff are assigned to different departments, and consist principally in—

(1) "Procuring the fuliest obtainable information about the organization and the changes occurring in all the armies of the world;

(2) "Preparations of every kind to keep the army in a permanent state of readiness for war;

Digitized by Google

(3) "Perfecting the means of transportation for the army in the event of war, especially the railroad lines of strategical importance."

There are also departments for topographical surveys of the empire, for military history, geography and the like.

JAPANESE SYSTEM

Compulsory universal service.—Service in the army or navy is universal and compulsory. Liability commences at the age of 17 and extends to the age of 40, but actual service begins at 20.

Divisions of service.—All physically capable of bearing arms are divided into two classes, the "fit" and the "absolutely fit."

Geneki.—The number necessary for the first line or active army, called the *Geneki*, are taken solely from the absolutely fit. Service in the ranks is two years for the infantry, three in all other arms and either four (or five) years and four months in the reserve. Reservists are called out twice for training during their reserve service, for sixty days on each occasion.

Kobi.—After completing seven years and four months in the first line, including its reserve, men are transferred to the second line, called *Kobi*. Service in the *Kobi* is for ten years, with two trainings of sixty days each in the whole period.

Kokumin.—At the end of their *Kobi* service the men are in their 38th year and then pass into the *Kokumin*, which is the territorial or home defense army. In this they serve two years and eight months, to complete their total service of twenty years.

Hoju.—The reserve for making good the waste of war is called *Hoju*. It is composed of the balance of the absolutely fit recruits not required for the first line, and of as many of those classed as fit as may be required to make up a certain fixed number. They all serve in the *Hoju* for seven years and four months, during which they have a first training of 90 days and two subsequent trainings of 60 days each. After completion of this period they are passed to the *Kobi* in which they serve for ten years.

Regional organization of army.—The Japanese Islands are divided into military districts corresponding to the divisions of the army and the district is the unit of administration as well as of territorial command. Each division is supplied with recruits from its own district, except the Guards, whose infantry recruits are selected from the whole country.

Strength of army.—No returns of the peace strength of the active Japanese army are published.

ENGLISH SYSTEM

Voluntary enlistment.—Service in both the Regular and the Territorial army is by voluntary enlistment.

Regular army.—On a peace footing the Regular Army is composed of the permanently embodied troops, the Army Reserve, and the Special Reserve.

Digitized by Google

Service in the permanently embodied portion of the Regular Army and the Army Reserve is for twelve years, with permission to extend to twenty-one years in certain circumstances. Of the original twelve years, from three to nine are spent "with the colours," and the remainder of the time in the Army Reserve. Enlistment is possible between the ages of 18 and 25. The average service of infantry is seven years "with the colours" and five in the Reserve.

Expansion for war.—On mobilization for war the commands are raised to war strength from the Army Reserve, and, to a small extent, from the Special Reserve.

A large part of the Regular Army serves in the overseas dominions of the Empire, in addition to local forces known as the "Indian Army" and the forces of other dominions.

Special Reserves.—The Special Reserve was created in 1907 out of the militia, and is available for service abroad in time of war. Its officers are for the most part non-professional. The units are attached to permanent depots, and the enlistment term is six years. Recruits undergo, generally, five months' preliminary training, and the trained men are called annually for three weeks, with six days of rifle practice in addition for infantry.

Territorial army.—The Territorial Army is primarily for home defense, with enlistment age-limits of 17 to 35 years. The enlistment term is four years. The requirements for training are two weeks in camp and a number of drills varied for the different arms. Unless exempted, the soldier absenting himself from camp is liable to a penalty of 5 pounds. With the exception of certain of the generals and staff all officers are non-professional.

Administration.—The land forces are administered by an Army Council, composed of the Secretary of State for War and the heads of the six departments in the War Office. The Territorial Army is under County direction, the War Office maintaining general control of expenditures.

Regular officers.—Officers are commissioned by Royal appointment after education prescribed: for the artillery and engineers in the Royal Military Academy; for the cavalry and infantry in the Royal Military College, and for the Staff in the Staff College. The Officers' Training Corps, in two divisions representing the universities and the public schools, provides officers for the Special Reserve and the Territorial Army.

Size.—Effectives, reported as of January 1, 1914, were as follows: Regular Army, 156,000; Reserve Army, 147,000; Special Reserve, 63,000; Territorial Army, 252,000; British Army in India, 78,500.

Digitized by Google

METHODS AND CONTENT OF COURSES IN HISTORY IN THE HIGH SCHOOLS OF THE UNITED STATES

HUGO H. GOLD
State University of Iowa

PART II. METHODS AND MATERIALS USED IN HIGH-SCHOOL HISTORY[1]

INTRODUCTION

a) The questionnaire.—The material for Part II of this article was obtained from a questionnaire sent to 480 high schools selected at random from the cities as listed in the *Educational Directory* published by the United States Bureau of Education.

Name of Teacher_____Address_____

1. How many volumes in your high-school library? How many volumes on history?
2. What percentage of your high-school pupils are enrolled in history courses?
3. What methods are used in the teaching of history, e.g., topical, chronological, etc.? How do you use the text?
4. Do you require collateral reading?
   a) What amount relative to the text assignments?
   b) In what year of the course do you require most?
   c) How many pages? 1st year? 2d year? 3d year? 4th year? If unable to state definitely indicate here:
   Very little? Considerable? Much?
   Do you emphasize intensive or extensive reading?
5. Give classification and character of collateral reading: e.g., to what extent are references made to:
   a) Texts similar to the one in use?
   b) The more extensive works?
   c) Poetry?
   d) Historical fiction?
   e) Biography? If so, what?
   f) Magazines, newspapers, etc.?
   g) Other materials.
6. By what methods do you test the collateral reading?

[1] Part I appeared in the *School Review*, February, 1917.

Digitized by Google

7. Do you consider collateral reading by pupils an important part of the work in history? Please give reasons:
8. Do you require written reports? Oral reports?
   How often? Of what character?
9. Do you require the use of a permanent notebook in all courses? If not, give reasons.
   What do you require to be entered in it?
   Is it examined and graded by teacher? How often?
   What do you consider are the advantages and disadvantages of keeping a notebook?
   Please give any suggestions you have found helpful.
10. Do you use source materials? To what extent?
    In what manner?
    Character of sources used?
    Aim or purpose?
11. Is map drawing required in all history courses? How many maps?
    How are they prepared?
    Data entered in them?
    Purpose?
12. What special devices are used to aid in locating and correlating events in time?
13. To what extent do you require the memorizing of dates?
14. What special devices are used in the teaching of civics to secure concreteness and motivation?
15. Do you attempt to correlate history with other subjects? If so, what and by what methods?

Make any additional suggestions regarding devices, method, etc. which you consider helpful in the teaching of history, and which have proven successful in your work.

In response to this questionnaire 135 replies were received from teachers representing 60 high schools or high-school systems in the North Central states, 30 in the North Atlantic, 30 in the Western, 11 in the South Central, and 4 in the South Atlantic states. The data on each question will be treated in exactly the same order as treated in the questionnaire, each question being considered as a separate unit.

b) Supplementary material.—The median as well as the modal high-school library contains 1,500 volumes. The modal number of volumes on history was 200, the median 300. Historical works constituted approximately one-fourth of the total volumes in the libraries. The Commission on Accredited Schools and Colleges of

Digitized by Google

the North Central Association of Secondary Schools and Colleges recommends that the minimum number of volumes on history a high-school library should contain is 175, well chosen—20 volumes on ancient, 25 on mediaeval and modern, 50 on English, and 75 on American history. The facts are that not one-half have reached this standard for the minimum requirement.

c) *Number enrolled in courses in history.*—This question was answered by 129 teachers, the answers show a variation of from 20 per cent to 100 per cent, the mode being 50 per cent. This shows that at any given time approximately one-half of all high-school pupils are enrolled in history courses.

METHODS OF TEACHING HISTORY

It seems that the most prevalent methods are "topical" and "chronological," with the greater emphasis on the former. Only three replies mentioned the "quiz" method, but there is little doubt that this method is used by all teachers. From the small number of different methods reported it is evident that many teachers are not familiar with the technical names for the various methods of teaching. Only three teachers mentioned the syllabus and library method, while only one mentioned the problem method. In the opinion of the writer the latter method is one of the most effective means of teaching history.

a) *How the textbook is used.*—The manner of using the textbook is clearly recognized as an important factor in the teaching of history in the high school. Very few teachers are content to risk a single textbook as furnishing the only source of preparation on the part of the pupil. The tendency is to hold the student responsible for the mastery of the textbook as a minimum requirement, which is to be supplemented to a greater or less extent by outside readings on the more important topics. It is necessary to require a pretty thorough knowledge of the textbook in order that the student may get a foundation for the work, or, in other words, that he may get the necessary general information intelligently to discuss the main topics and to be able to explore wider fields.

It is a common practice to follow the textbook quite closely during the Freshman and Sophomore years, but in the advanced

Digitized by Google

courses in modern and American history the textbook serves merely as an outline. In explaining her method of using the textbook one teacher presents the following:

1. Rapid reading of the textbook by students outside of class: in assigning the lesson their attention is called to the main points they are expected to answer in class.

2. Review of the textbook by topics from the index.

3. A review chronologically of the larger phases.

4. All of this is supplemented by dictated notes and outlines, by map drawing, and by talks on the points where the textbook calls up present-day conditions; also frequent examinations.

Sometimes the textbook furnished the "thread," sometimes the material for discussion, and sometimes merely a "point of departure."

A commendable method is, after having studied the complete textbook in detail, to use the indexes in reviews for tracing topical questions. The history of the tariff, for example, may be traced advantageously in this manner.

In answer to the question, "Do you require collateral reading?" all except two teachers stated that some reading in addition to the regular textbook assignments is required of all pupils. In these two cases the pupils are encouraged to do outside reading, but are not required or compelled to do it. This question was answered by every teacher who returned the questionnaire.

b) Amount of collateral reading relative to the textbook assignments.—In 47 cases there was no attempt made to estimate the amount of collateral reading relative to the regular textbook assignments. In 28 other cases the answers were that the amount varies with the different years or classes with no quantitative estimate for the specific years. Only 10 say the amount of collateral reading exceeds the textbook assignments. There seems to be no standard as to the amount of collateral reading which should be required. The largest amount is usually required in the third and fourth years of the course. In 5 schools, however, the greatest amount of supplementary reading is done in the Freshman year. The reason given for this was that it accustoms the pupil to the historic method, preparing him for more effective work in later years. There is tremendous variation in the amount of collateral reading required in the Freshman and Sophomore years, the amount varying from none to thirteen hundred pages. In the Junior and Senior years

Digitized by Google

the amount varies from none to fifteen hundred pages. Such wide variability in practice indicates that pupils coming from one high school receive a vastly different sort of training from those coming from another.

The Commission on Accredited Schools and Colleges of the North Central Association specifies a minimum amount of collateral reading, which is to be carefully selected, at least one-fourth of this amount to be source material: (1) ancient history, 200 pages; (2) mediaeval and modern history, 150 pages; (3) English history, 300 pages; (4) American history, 350 pages. Only 19 schools require more than the minimum amount in ancient history, 34 in mediaeval and modern, 26 in English, and 28 in American history. Approximately 30 per cent of those making a definite estimate require less than the minimum standard of the North Central Association. The answers as a whole seem to indicate that teachers in general have paid little attention to, or are ignorant of, the specification of the Commission as given above. In one case in answer to the question, "How many pages per year?" it was sapiently remarked, "Foolish question! It is not *pages* but the 'wisdom which lingers' that we wish the student to get from collateral reading!"

c) Intensive and extensive reading.—The greatest emphasis is placed upon intensive reading, although there is a definite attempt to do some extensive reading, the amount depending upon the subject-matter and the age of the pupils. There is considerable disagreement among teachers. Eight say they go from extensive in the first years to intensive in the later years of the course, while 11 say they go from intensive to extensive.

The methods of testing collateral reading are generally class reports, oral and written examinations, notebooks, occasional themes, book reviews, report slips handed in, conferences with individual students, etc.

d) Classification of collateral reading.—In checking the relative frequency with which references are made to other secondary-school textbooks, similar to the regular history textbook and to the more extensive works, the thing which stands out most prominently is the lack of any uniformity in practice. Some contend that references should not be made to secondary textbooks, that this is

Digitized by Google

only confusing because of errors and disagreements among authors. Others have very little material for reference except secondary textbooks. Still others claim that the larger historical works and contemporaneous writings are too complicated and too detailed for high-school students. It might be suggested that students ought to become somewhat familiar with the opinions of the different authors; they should know that their own textbook is not infallible and that it does not contain all that has been written on a given subject. They should at least use the more extensive histories enough to get acquainted with the methods of writing history.

About one-half of the teachers seldom or never use poetry for collateral reading. When it is used, it is usually merely for illustrative purposes or is merely recommended or "suggested," but not required. These remarks are also applicable to historical fiction. The tendency, however, is to use a little more historical fiction than poetry.

Biography is used more than any other class of collateral reading, the tendency being to use most biography in connection with American history. The "American Statesmen Series" by Morse is a favorite reference.

Magazines and newspapers are used for collateral reading to a considerable extent, especially in advanced classes or in connection with modern and American history. It is a common practice to have a current-event day once a week, the whole class-period being devoted to the discussion of events, movements, and tendencies of the present day. Such periodicals as the *Literary Digest*, *Independent*, *Current Events*, and *Outlook* were frequently mentioned. This is a commendable practice and is in accordance with the recommendations of the committees. In this way students are brought into touch with history in the making.

Other materials used in connection with the collateral reading are mentioned by about 40 teachers. Pictures and postcards are mentioned in 24 courses in history, and 16 teachers report that they make frequent use of such material. Twelve schools seem proud of the fact that they are provided with stereopticons. Two teachers mention taking their classes to see the moving-picture shows. In a few cases teachers mention using myths and stories,

Digitized by Google

travel reports, industrial exhibits, clippings, curios and relics, old settlers' testimony, etc., for supplementary material.

There is no definite standard as to what shall constitute the collateral reading.

e) *Value of collateral reading.*—The following table was made in order to determine whether or not history teachers have a conscious

TABLE I

Statement of Aim	Frequency
Broadens views of the student (horizon)	49
Makes the work more interesting	37
Acquaintance with views and style of different authors	36
Training in use of books, library, card catalogues, *Poole's Index*, sources, etc.	25
Trains student in weighing values (judgment, discrimination)	22
To illuminate and supplement the text	20
Furnishes wider *general knowledge*	18
Cultivates independence in study and thought	14
Knowledge of books	11
Tends to stimulate a conservative liberalism	10
To create the habit of reading	10
Necessary in the acquirement of historical background	9
To get the setting of events and make history real and vital	8
To show how much might be known	8
To create the spirit of investigation	8
To verify the text	7
Current events are necessary to understand progress	7
To cultivate a taste for good reading	6
Furnishes maximum of information with minimum effort	6
Correlates history with other subjects and everyday life	6
Knowledge of the great authorities	5
Biography vitalizes the study	4
Fixes important topics and clinches essentials	4
An opportunity to adapt amount of work to individual pupils	3
To develop character—the moral sense	2
Reading with a point of view is liberalizing	1
Tends toward college method	1
Poetry and fiction to arouse the love of the beautiful	1
Furnishes points of contact in teaching	1
Directs one's interests in after-life	1
Broadens the vocabulary	1

purpose or definite aim in using the materials not found in the regular textbook. Only 8 of the 135 teachers fail to give an

Digitized by Google

evaluation. This table ought to be helpful to teachers in working out a clearly defined aim.

In answer to the question, "Do you consider collateral reading by pupils an important part of the work in history?" only 6 teachers answered "No," the principal reasons being, (1) that students take little interest in it because it means additional burden, (2) that it causes pupils to become superficial in study, hence it is better to master the textbook, and (3) that students are too immature. There is a general feeling on the part of many teachers that there is a danger of overdoing work of this character. The concensus of opinion, however, is that collateral reading is a very important part of effective history teaching.

One particular merit of collateral reading is the opportunity afforded to adapt the amount of work to individual pupils. A stronger pupil can often do three or four times as much reading as the weaker pupil, and if the reading is properly directed the problem of individual differences is partially solved.

Eleven teachers report that they are so handicapped by lack of time or improper library facilities that it is impossible to do much collateral reading.

Table I shows the aim or purpose of collateral reading, as evaluated by 127 history teachers.

ORAL AND WRITTEN REPORTS BY PUPILS

One custom in the teaching of history which is worthy of special mention is the opportunity given to the pupils for self-expression through the medium of formal oral and written reports. These are usually prepared by the pupils from assigned supplementary readings. Sometimes these assignments are made to the class as a whole and sometimes topics are assigned to individual pupils. This method should be especially valuable for several reasons. In the first place, it furnishes a motive for the pupil in his outside reading. The fact that the pupil is to report to the class in a formal manner the results of his research causes him to use more discrimination in his reading. He is reading with an end in view. He is confronted with the responsibility of making a contribution to the class recitation. In the second place, the pupil is conscious of the

Digitized by Google

fact that he is doing a constructive piece of work in the preparation of a formal report. Most pupils are interested in work which exercises their constructive powers. Short oral reports on special topics are used most frequently, 125 teachers saying they require oral reports and 118 mentioning written reports; 8 teachers state that they never require written reports, while only 1 teacher states that he never requires oral reports.

a) Frequency of formal reports.—In 19 cases there was no estimate of the frequency of formal reports. There was great range in the frequency of required formal reports, from "daily" to "only once a year." The answers were so varied that the only statement which applies is that there is no common practice. However, there is a tendency in many schools to hold pupils individually responsible for two or three more or less extensive reports each semester, either oral or written. In many instances oral reports consist of formal recitations of three to fifteen minutes' duration by individual pupils. Eight teachers state that they get better results from oral reports and that very few written reports are required. The most common form of written report is a theme of from one thousand to three thousand words, once each semester, read in class by the individual pupil. However, 12 teachers require short written reports varying in frequency from twice a month to twice a semester, while 14 teachers say they seldom require written reports of any kind.

A common practice is to have shorter and less intensive papers written in the Freshman and Sophomore years, and more comprehensive and extensive reports in the third and fourth years. In the Freshman year these themes are often of a biographical nature or dealing with some pathetic or dramatic incident. One bad practice is the custom of having the reports written up in the notebooks and never discussed in class. Such a method would have a tendency to make pupils of high-school age superficial in their work, and the teacher would have no positive knowledge that they really understood what such reports contained.

[*To be continued*]

Digitized by Google

STANDARDIZED TESTS AND THE IMPROVEMENT OF TEACHING IN FIRST-YEAR ALGEBRA[1]

H. O. RUGG
School of Education, University of Chicago
AND
J. R. CLARK
Parker High School, Chicago

D. THE FUNCTION OF ALGEBRA TESTS

Algebra tests may have two functions: (1) they provide a yardstick for measuring the results of instruction and for determining the relative efficiency of teaching and the progress that teachers and pupils are making; (2) *their more important function, however, is that of diagnosis: they reveal difficulties in learning and point out needed changes in teaching emphasis.*

1. MEASURING THE RESULTS OF INSTRUCTION IN ALGEBRA IN 27 SCHOOL SYSTEMS BY MEANS OF THE TESTS

The formal Tests I–XI have been given in the following 27 school systems:

Cities in Illinois

*Rossville	Marshall	*Carbondale Normal School
Robinson	*Lincoln	Cairo
Bradley	*Highland Park	*Benton
Pekin	*Henry	*Watseka
*Paris	Gibson City	Waukegan
*Palatine	*Divernon	*Decatur
*Oak Park	*Chicago Heights	*Joliet
*Mount Olive	Charleston High School	
*Mount Carmel	Charleston Normal School	

Cities Outside Illinois

Muskogee, Okla. *Mankato, Minn.

[1] A final report on the "Experimental Determination of Standards in First Year Algebra," made to the Mathematics Section of the University of Illinois High-School Conference, November 24, 1916. Part I appeared in *School Review*, February, 1917.

Digitized by Google

In those 17 cities marked with an asterisk the verbal tests were also given. In addition to these 17 cities the verbal tests were also given in the following four schools:

Crane Technical High School, Chicago
Parker High School, Chicago
Englewood High School, Chicago
Carter Harrison High School, Chicago

and in four schools which returned papers with no names. The number of pupils taking the tests in each school was about 50. The total number of pupils solving the formal tests was 1,182; the total number solving the verbal tests was 1,295.

From the detailed records of the results of this testing in 27 school systems we give in Tables II and III five typical sets of scores, namely, that of (1) the best school, (2) average of the upper third (9 schools), (3) the ninth school, (4) the average of all the schools (27 schools), (5) the lowest school. These five scores on each test, both for accuracy ("Rights") and speed ("Attempts"), show the range of attainment for representative algebra instruction, the best and the poorest attainment and a tentative standard (for the formal processes) which we would like to set before teachers of algebra.

The average attainment of the upper third of the 27 schools as the tentative standard of attainment in first-year algebra.—There have been many suggestions of late that the average of the entire group be taken as standard practice. We believe that the average of the entire group is too low a standard. It is contributed to by many schools of a very low instructional efficiency. On the other hand, in finding the average of some upper group we set a standard contributed to only by schools that have maintained a high level of instructional efficiency. To take the average of the upper nine schools means to discount the best attainment (of the highest school, by allowing for possible unusual conditions which might lead to the very best score), and yet to set a standard that has actually been exceeded by four, five, or six schools. In case any teacher wishes to compare her scores with those of the ninth school (whose record has been exceeded by eight schools) those scores are included here.

Digitized by Google

The tables make clear the striking differences in the speed and accuracy with which pupils manipulate different formal operations. The very large percentage of "rights" (of the problems

TABLE II

EFFICIENCY IN FIRST-YEAR ALGEBRA (RIGHTS)

Norms of attainment in eleven formal operations as determined by: (1) attainment of the most efficient school, (2) average attainment of the upper third of 27 schools, (3) attainment of the ninth school (i.e., the lowest school of the upper third), (4) average attainment of 27 schools, (5) attainment of the lowest of 27 schools.

	NUMBER OF PROBLEMS WORKED CORRECTLY PER MINUTE					
	Test I	Test II	Test III	Test IV	Test V	Test VI
Score of most efficient school	13.15	5.39	3.24	4.05	1.42	11.84
Average of scores of upper third of 27 schools	10.95	4.79	2.73	3.50	0.84	10.66
Score of ninth school	9.97	4.40 (18 schools were below this attainment)	2.44	2.94	0.53	9.85
Average of 27 schools was	9.65	3.81	2.20	2.85	0.54	9.19
Score of poorest school was	6.12	2.15	1.23	1.71	0.17	4.28
	Test VII	Test VIII	Test IX	Test X	Test XI	
Score of most efficient school	2.75	1.97*	5.28	2.76	0.86	
Average of scores of upper third of 27 schools	2.02	4.16*	3.91	1.60	0.73	
Score of ninth school	1.73	5.92* (18 schools were below this attainment)	3.35	1.19	0.62	
Average of 27 schools	1.37	7.91*	2.76	1.09	0.63	
Score of poorest school	0.51	1.97*	0.12	0.10	0.25	

* Minutes required to solve one problem.

attempted), together with the large number of problems worked per minute in the case of Tests I and VI, lead to the conclusion that present methods of *instruction in the removal of parentheses and in the use of exponents leads to satisfactory automatism of these operations*. Pupils have reduced the manipulation of the paren-

Digitized by Google

thesis to a high state of efficiency. Even in the case of exponents, however, 15 per cent of errors are made on the average.

On the other hand, the score of the poorest school was but slightly more than half that of the average of the upper nine. In

TABLE III

SPEED IN WORKING FORMAL PROBLEMS (AS SHOWN BY NUMBER OF PROBLEMS ATTEMPTED)

Norms of attainment in eleven formal operations as determined by: (1) attainment of the most efficient school, (2) average attainment of the upper third of 27 schools, (3) attainment of the ninth school, i.e., the lowest school of the upper third, (4) average attainment of 27 schools, (5) attainment of the lowest of 27 schools.

	NUMBER OF PROBLEMS WORKED CORRECTLY PER MINUTE					
	Test I	Test II	Test III	Test IV	Test V	Test VI
Score of most efficient school	14.54	6.26	4.23	4.57	3.00	13.36
Average of scores of upper third of 27 schools	11.59	5.80	3.50	4.14	1.51	12.46
Score of ninth school	10.68	5.51	3.24	3.87	1.16	11.51
		(18 schools were below this attainment)				
Average of 27 schools	10.36	4.94	3.02	3.60	1.14	11.16
Score of poorest school	6.50	2.82	2.20	2.40	0.49	7.91
	Test VII	Test VIII	Test IX	Test X	Test XI	
Score of most efficient school	3.47	1.44*	7.27	4.19	1.08	
Average of scores of upper third of 27 schools	2.88	2.50*	5.80	3.23	0.95	
Score of ninth school	2.63	3.87*	5.23	2.82	0.83	
		(18 schools were below this attainment)				
Average of 27 schools	2.35	3.05*	4.85	2.71	0.81	
Score of poorest school	1.40	1.44*	2.88	1.48	0.47	

* Minutes required to do one problem.

fact, in all remaining tests, the score of the poorest school is *less than half* that of the average of the upper third. In some it is only one-fifth to one-sixth of the standard score. Such low levels, combined as they generally are with low efficiency in "translation"

Digitized by Google

processes (see Table III), certainly *call for closer supervision of instruction.* As pointed out in last year's report, *they indicate, in some cases at least, a lack of teaching emphasis on certain operations with a corresponding greater emphasis on others.* This question of teaching emphasis in the case of very good and very poor schools is further illuminated by tracing the record of individual schools in each of the different operations. If this is done, it will be found that the three poorest schools fall in the lowest third in all but 2 tests. The two best schools fall in the upper third in all but 2 of the 11 tests.

The scores for all remaining tests (except Tests I, II, and VI) point out definite lack in making automatic a skill necessary to success in using algebraic methods in original solution. Note, for example, the original scores for Test V, fractions; Test VII, quadratics; Test VIII, graphs; Test IX, radicals; Test X, practical formulae; Test XI, simultaneous equations. The upper group in each case shows what may be regarded as a fair degree of speed, but almost universally shows a woeful lack of accuracy. We believe that *instruction in these operations should lead to automatic efficiency. Under such a condition recurring mistakes in a class would be impossible, accidental mistakes would occur, but be very rare* (e.g., mistakes in reading, writing, and rare mistakes in arithmetic). The test at least reveals the results of instruction in these processes.

2. THE RELATION BETWEEN EFFICIENCY IN THE AUTOMATIC PROCESSES AND EFFICIENCY IN REASONING PROCESSES

Teachers and administrators who have been loath to adopt "measuring methods" in their school practice and who have hesitated to introduce practice exercises do so on the ground that such a procedure will "mechanize" teaching. This same skepticism has been commonly expressed as a result of the 1915 report on algebra—the point of view of the writer and the implications of the report certainly having been misunderstood. The 1916 testing was, therefore, planned to take account of this question. Seventeen school systems took the eleven formal tests and also the verbal or reasoning tests. Table IV gives the comparative ranks of each of the 17 schools in both types of test. To permit a composite

Digitized by Google

comparison of ability of the two types, the rank of each of the 17 schools has been determined for accuracy in each of the eleven tests. A tabulation was then made to give the aggregate ranks of each school. The list was then reranked, calling the school that had the lowest number of aggregate ranks 1, the next lowest 2, etc., throughout the list. The final comparison of ranks is shown in Table IV.

TABLE IV

COMPARISON OF THE RANK OF 17 SCHOOLS IN EFFICIENCY IN MANIPULATION OF THE FORMAL OPERATIONS WITH RANK OF SAME SCHOOLS IN EFFICIENCY IN REASONING TESTS

School System	Rank in Aggregate Scores Made in:		School System	Rank in Aggregate Scores Made in:	
	Reasoning Tests	All Formal Tests		Reasoning Tests	All Formal Tests
A.....	1	1	T.....	3	6
C.....	9	9	M.....	8	11
F.....	11	5	N.....	4	14
Y.....	16	16	P.....	13	2
G.....	14	10	Q.....	6	4
I.....	10	13	R.....	12	7
J.....	2	3	V.....	15	17
Z.....	7	8	W.....	17	15
K.....	5	12			

The first, ninth, sixteenth, tenth, second, seventh, third, eighth, sixth, fifteenth, and seventeenth schools in the "reasoning tests" occupy ranks in the "formal tests" equal to these or not displaced by more than 3 places in 17. That is, 11 of the 17 schools stand almost in the same relative position in reasoning efficiency as in formal efficiency. Of the whole 17 schools only 2 show a distinct reversal of position in the two types, schools N and P. In view of the preponderance of evidence showing high positive correlation between these two types of processes we are unable to account for the status of the data on these two schools. Of the remaining 4 schools, G is displaced four places, R, 5 places, and K, 7 places. For those interested in correlations we may say that by Spearman's footrule method (with 17 cases any coefficient has little validity, hence we may as well use a rough approximate method as the more accurate product-moment method) $r = 0.59$, which may be regarded as a high correlation.

Digitized by Google

Careful study of our complete data leads us to the conviction that those teachers who have been most successful in developing skill in manipulating the formal processes have also been most successful in developing ability to "translate" verbally stated problems into algebraic symbolism. We regard this as pertinent to the question of "mechanization" of the teaching process. . . . . We believe that it emphasizes the main point we are trying to make: namely, that with carefully planned practice periods, using scientifically built-up practice material, teachers will be still more effective in developing "original ability."

Certainly, without the aid of scientifically planned practice devices, teachers who have been most successful in doing the one, have been, very generally, most successful in doing the other. We have no reason to believe, from our present detailed data, that teachers who drill their pupils to a relatively high state of "formal efficiency" do so by neglecting the higher thought processes in algebraic solution. The teachers, furthermore, have done this without the aid of carefully differentiated drill exercises. They have followed, in the main, the traditionally planned textbook organization of theoretical presentation and "problem exercises."

We take the position that much greater correlation might come about, then, through the aid of carefully designed practice exercises which put the chief emphasis in practice upon the difficult processes, saving time for more detailed training in those types of solution that call for analysis discrimination and other higher thought processes. Testing pupils' ability to manipulate algebraic operations does not lead to a general blind "mechanization" of the teaching process. It leads to an intelligent understanding of *what* operations ought to get the most drill and relatively how much they ought to be drilled—in a word, *differentiated drill takes the place of blind wholesale drill such as will ensue if one follows the textbook organization as the sole guide.*

3. THE RELATION BETWEEN SPEED AND ACCURACY IN "FORMAL EFFICIENCY"

Table V gives the rank of each of the schools in number of problems attempted and number right. The high degree of relationship between speed (represented by "number of problems

Digitized by Google

TABLE V

COMPARISON OF SPEED AND ACCURACY, AS SHOWN BY RANK OF 27 SCHOOLS IN EACH OF 11 FORMAL TESTS IN NUMBER OF PROBLEMS ATTEMPTED AND NUMBER OF PROBLEMS RIGHT

School System	Test I		Test II		Test III		Test IV		Test V	
	Rank in No. Problems									
	Att.	Rt.	Att.	Rt.	Att.	Rt.	Att.	Rt.	Att.	Rt.
A	14	12	15	13	2	1	17	8	5	5
B	4	3	3	3	20.5	15	2	1	3	3
C	15	14	16	22	18.5	13	22	21	22.5	14
D	2	4	13	11	6	4	4	5	10	9.5
E	17	13	27	27	22.5	20	16	19	21	21
F	12	9.5	7.5	7	9	5	15	17	15.5	16
G	20	18	6	2	11	9	26	23	11	8
H	5	2	2	1	4	3	18	11	27	26
I	27	27	9	10	3	2	8	13	7	7
J	88	8	7.5	5	12	12	7	6	1	1
K	22	22	25.5	23	18.5	23	21	18	22.5	23
L	7	4.5	11	8	5	6	1	2	18	21
M	23	24	12	17	25	26	14	15.5	12	19
N	10	19	22	25	22.5	25	12	15.5	17	15
O	26	25	25.5	24	27	24	20	20	24	21
P	19	16	20	14	15	11	5	4	9	4
Q	1	1	1	4	7	18.5	6	10	4	6
R	18	17	4	15	16	18.5	11	14	2	12
S	6	6	5	6	14	7	3	3	15	11
T	25	23	24	20	1	14	27	27	14	18
U	16	20	21	21	8	8	10	9	8	9.5
V	24	26	17	19	26	27	25	26	26	25
W	13	15	19	18	17	22	23	25	25	27
X	9	11	14	9	10	10	24	24	13	24
Y	21	21	23	26	20.5	21	19	22	19	17
Z	3	5	10	12	11	17	9	12	20	13	13
*	11	7	18	16	24	16	13	7	6	2

	Test VI		Test VII		Test VIII		Test IX		Test X		Test XI	
	Rank in No. Problems											
	Att.	Rt.	Att.	Rt.	Att.	Rt.	Att.	Rt.	Att.	Rt.	Att.	Rt.
A	18	6	11	2	19	11	5	2	23	6	10	9.5
B	2	27	1	1	2	6	1	1	1	1	2	1
C	9	12	23	23.5	16	16	16	12	2	7.5	25	23
D	4	4	18	14	24	26	12	7	18	14	12	12
E	24	22	25	27	22	2	24	26	12.5	15	23	19.5
F	15	13	10	7	12	13	17	16	9	9	1	4
G	25	23.5	27	25.5	26	22	23	14	21	18	20.5	11
H	26	25	9	4	10	7	3	3	12.5	16.5	14	7.5
I	23	16	24	20	9	9	6	8	25	11	20.5	18
J	6	8	7	13	5	5	11	10	6	16.5	5	7.5
K	7	7	4	8	1	1	25	24	26	26	9	13
L	8	9	8	15	18	4	2	9	10	24	8	21

Digitized by Google

TABLE V—*Continued*

School System	Test VI		Test VII		Test VIII		Test IX		Test X		Test XI	
	Rank in No. Problems											
	Att.	Rt.	Att.	Rt.	Att.	Rt.	Att.	Rt.	Att.	Rt.	Att.	Rt.
M.....	14	10	5	17	4	12	18	19	5	10	7	15
N.....	10	11	20	10	20	15	26	25	24	23	16.5	16.5
O.....	22	20	19	18	25	23	10	6	19	5	27	27
P.....	13	5	16	5	6	10	13	4	8	4	11	6
Q.....	12	23.5	3	6	15	19	9	5	16	19	4	2
R.....	17	14	15	12	8	6	14	18	7	12.5	6	3
S.....	1	3	2	3	13	18	22	20	3	2	20.5	14
T.....	21	21	13	9	243	8	15	13	20	12.5	16.5	19.5
U.....	20	15	17	16	14	24	20	22	15	7.5	24	25
V.....	27	26	26	21	....	....	19	23	22	21	26	24
W.....	16	19	21.5	22	17	25	8	17	17	25	14	22
X.....	11	18	6	11	7	20	7	11	4	22	3	5
Y.....	19	17	21.5	23.5	11	14	....	....	.....	.....	20.5	16.5
Z.....	3	2	13.5	19	21	21	4	15	14	20	18	22
₹.....	5	1	13.5	25.5	23	17	21	21	11	3	14	9.5

attempted") and accuracy (represented by "number of problems right") will be evident to the reader. The schools ranking high in speed are very generally the schools ranking high in accuracy. In Test V, which we will take at random, the footrule correlation gives R=0.70 or r=0.89 by Spearman's transmutation formula. By supplying the detailed data in Table V we do not need to discuss the material in detail here. The conclusion is clear that speed and accuracy in these formal operations go hand in hand.

We feel that this point is of great importance in the methodology of teaching. From individual experimentation in the classroom, the writers are convinced that *speeding up class work conduces to greater accuracy in the manipulation of formal operations.* The results of testing pupils in 27 schools confirm our classroom experience.

Thus the teaching program that we would lay before teachers is contributed to by the findings of the last sections: First, *drill pupils daily in the formal operations by stressing the most difficult and the most important processes.* (As a result of our investigation we know the most difficult processes, and they will be taken up in the next section. We do not know the *most important processes* however. The Illinois Committee on Standards has set as one

Digitized by Google

of its tasks for the next year of research the determination of the answer to this question.) Secondly, drill pupils under "time conditions." *It should be made "second nature" to manipulate the different formal operations under the pressure of "time." Life situations continually demand it—the school should constantly prepare for it.* Again classroom experimentation of blackboard and seat work done by the writers leads to this conclusion.

At this point let us call to mind the steps of our general program. We have stated the aim and outcome of teaching algebra; classified the content carefully into fundamental operations and types of problems; designed tests for each fundamental operation and for verbal problems, establishing definitely our principles of design and procedure; given the tests to large groups of pupils; set up tentative standards of speed and accuracy for each operation and made it possible to compare the practice and efficiency of a teacher or a school with the efficiency of the "best schools"; discussed the "yardstick" function of tests, the relation between formal efficiency and reasoning ability, and the *relation* between speed and accuracy.

4. THE CHIEF FUNCTION OF STANDARDIZED TESTS IN FIRST-YEAR ALGEBRA: DIAGNOSIS

We said that tests have two functions: (1) measurement of abilities in order to establish norms and compare attainments; (2) diagnosis of difficulties of individual pupils. The greater of these two functions is the latter.

We are primarily interested in ways and means of improving instruction in first-year algebra—only incidentally interested in establishing standards or norms of attainment. The norm of attainment is of value only as it spurs the teacher to a high standard of class-teaching; the test is of value only as it points out principal typical difficulties that pupils face in learning algebra. If it is properly designed, that is, if it measures *specific processes*, it can be made to do this.

Pupils' errors in first-year algebra.—Pupils make two principal kinds of errors: (1) accidental errors (i.e., errors of reading, writing, following directions, arithmetic, etc.), and (2) recurring errors.

Digitized by Google

Recurring errors supply a means of determining exactly which types of problems, operations, or processes pupils have not mastered provided the tests are rigidly designed on the "cycle" or "rotation" principle. Thus, in diagnosing difficulties in "learning," *it is the recurring errors that are significant.* They reveal which types of operation have not been mastered. The *Standardized Tests* submitted herewith, designed as they are on the principle of recurring types of operation *reveal exactly which are the typical difficulties pupils face.*

Table VI gives a complete list of recurring errors made by 100 pupils on each of the 11 formal operations, together with the frequency of occurrence and the percentage that the recurring errors of each particular type are of all recurring errors made.

This list is complete for the pupils whose work was studied. It has been compiled by the writers of this report, who scored and judged carefully every problem on each of the 11 tests for each pupil. In many cases the combined judgment of the two writers was made on particular errors. The list can be used by teachers as a definite guide to help eliminate these particular errors on the part of their pupils. Knowledge as to which are the most difficult operations will lead to wise methods of eliminating the errors in such operations.

Let us summarize *the outstanding facts concerning the recurring errors made on formal operations.*

Test I. *Removal of parentheses.*—A fairly high degree of efficiency was maintained. Of the mistakes that were made, one-half were in the use of signs. Of these, twice as many were made when the $-$ sign was used outside the parentheses as when the $-$ sign precedes the first letter inside (with $+$ sign outside). (The writers' drill exercises take account of this.) One-sixth of all pupils make an arithmetic mistake on this problem.

Test II. *Special products.*—One-fourth of all recurring mistakes are on cross-products. This is also confirmed by predominance of error No. 14 in Test IV. A very large group of pupils fail to square the literal factor when the exponent is greater than 1, and another considerable group use the product of two numbers instead of twice the product.

Digitized by Google

TABLE VI

COMPLETE LIST OF "RECURRING ERRORS" FOR EACH TEST, TOGETHER WITH FREQUENCY AND PERCENTAGE OF OCCURRENCE

Each error in this list has occurred more than once upon the paper of some pupil. The numbers in the first column opposite each error, indicate the *number of pupils* [out of a "random selection" of 100] who made that particular error *one or more* times in the test. The numbers in the second column indicate the percentage of all pupils who make "recurring errors," who made that particular error.

No. of Error	Tests	I No. Pupils Making Error One or More Times	II Percentage of All "Recurring Errors"
	TEST I		
1	Arithmetic errors: $24 \cdot 8 = 182$; $18 \cdot 0 = 18$...	15	35.7
2	Omission of symbols, signs, or terms: $6(3x+8) = 18+48$.....	6	14.3
3	Errors of reading or writing: $(2x-3)^2 = 4y^2-12x+9$.....	.....	.....
4	Errors in use of signs in multiplication		
	a) Minus sign preceding ( ): $-4(3x-4) = -12x-16$.....	14	33.3
	b) Minus sign preceding first term within ( ): $9(-7x-1) = 63x-9$.....	7	16.7
	TEST II		
1	Arithmetic errors.....	5	6.6
2	Omission of symbols, signs, or terms.....	1	1.3
4	Errors in use of signs in multiplication	10	13.4
5	Errors in use of signs in addition: $(x+3)(x-4) = x^2+x-12$.....	2	2.6
6	Errors in cross-products: $(a-4)(a+5) = a^2-20$.....	20	26.7
	(NOTE.—It may be due to carrying over rule for product of sum and difference; made by pupils who got product of sum and difference correctly.)		
7	Use of product of two numbers instead of twice the product: $(2x-3)^2 = 4x^2-6x+9$	9	12.0
8	Inability in specific operation tested.....	15	20.0
9	Failure to square literal factor with exponent greater than 1: $(a^2+3)(a^2-3) = a^3-9$	13	17.4
	TEST III		
1	Arithmetic errors.....	33	47.8
8	Inability to grasp principle of substitution..	3	4.4
16	Squaring product of literal factor instead of the one designated: $ab^2 = (3 \cdot 2)^2 = 36$ if $a=3, b=2$.....	22	31.8
11	Using exponent as coefficient and vice versa: $x^2 = 10$ if $x=5$.....	2	2.9
12	Adding factors instead of multiplying them: $3xy = 3+5+2$ if $x=5, y=2$.....	9	13.1

Digitized by Google

TABLE VI—*Continued*

No. of Error	Tests	I No. Pupils Making Error One or More Times	II Percentage of All "Recurring Errors"
	TEST IV		
2	Omission of factors	4	4.3
3	Errors in writing	7	7.4
4	Errors in use of signs in multiplication	2	2.1
8	Positive inability to factor	37	39.4
13	Incorrect division by monomial factor: $5x^2+15x^3=5x^2(3x)$	1	1.1
14	Factors such that the sum of the cross-products are incorrect: $5x^2+16x+3=(5x+3)(x+1)$	20	21.3
15	Factors give correct first and second term, but incorrect third: $a^2+10a+24=(a+8)(a+2)$	4	4.3
16	Failure to recognize monomial factor: $6a^2+9a^3=(2a+3)(3a+3a^2)$	14	14.8
17	Failure to get *highest* monomial factor: $12y+18y^4=2(y+9y^4)$	5	5.3
	TEST V		
1	Arithmetic errors	28	18.4
1a	Arithmetic error of this type: $-n\cdot 0=n$	8	5.2
3	Error in writing	3	1.9
4	Errors in use of signs in multiplication	4	2.6
5	Errors in use of signs in addition	28	18.3
8	Inability in specific operation tested	27	17.7
18	Failed to change signs if numerator preceded by $-$ sign: $\frac{4x-2}{3}-\frac{x-3}{4}=0$; $16x-8-3x-9=0$	27	17.7
19	Multiplied only one side of equation by L.C.M.: $\frac{3x}{4}+\frac{3x}{2}=5$; $3x+6x=5$	16	10.5
20	Error in use of sign in transposition: $3x+2=6$; $3x=6+2$	4	2.6
22	Error in division (result inverted, e.g., $13x=-1$, $x=\frac{-13}{1}$)	1	.6
23	Multiplied numerator by L.C.D. (e.g., $\frac{2}{2-x}-\frac{5}{2+x}=0$; $4-2x-20+5x^2=0$)	7	4.6
	TEST VI		
1	Arithmetic errors	11	8.0
3	Error in writing	6	4.4
8	Inability in specific operation tested	21	15.3
25	Incorrect use of exponents in multiplication:		
	a) Multiplying exponents instead of adding them: $a^3\cdot a^5=a^{15}$	9	6.5
	b) Subtracting exponents instead of adding them: $x^7\cdot x=x^6$	4	2.9
	c) Failure to add $x^7\cdot x=x^7$	1	0.7

Digitized by Google

TABLE VI—*Continued*

No. of Error	Tests	I No. Pupils Making Error One or More Times	II Percentage of All "Recurring Errors"
	TEST VI—*Continued*		
26	Incorrect use of exponents in involution		
	a) Adding instead of multiplying: $(x^3)^4=x^7$	45	32.4
	b) Subtracting instead of multiplying: $(x^3)^4=x$	1	0.7
	c) Dividing instead of multiplying: $(x^3)^4=x^{\frac{3}{4}}$	3	2.2
	d) Raising to a power instead of multiplying: $(x^3)^2=x^9$	18	13.1
	e) Failure to raise all possible factors to required power: $(ab^2)^3=(ab^6)$	16	11.6
27	Incorrect use of exponents in division		
	a) Adding instead of subtracting: $\frac{c^3}{c^2}=c^5$	1	0.7
	b) Multiplying instead of subtracting: $\frac{y^5}{y^4}=y^{20}$	2	1.5
	TEST VII		
8	Inability in specific operation tested	32	21.6
28*a*	Find only one root: $x^2-81=0$; $x=9$	28	19.0
b	One root correct; other incorrect: $y^2+y=6$; $y=-3$ or -2	2	1.3
14	Incorrect solution due to: factors such that sum of cross-products is incorrect: $n^2-7n=12$; $n=6$ or 2	71	48.0
29	Incomplete, e.g., $x^2-81=$, $x-9=0$, $x+9=0$	9	6.0
30	Incorrect use of formula method of solution	5	3.4
31	Solution by factoring left member; right member not 0: $n^2-7n=12$, $n(n-7)=12$	1	0.7
	TEST IX		
1	Arithmetic error	14	9.7
8	Inability in specific operation tested	88	60.6
24	Incomplete: $\sqrt{8}=\sqrt{4}\times\sqrt{2}$	2	1.4
32	Left factor of same power as degree of radical: $\sqrt{32}=2\sqrt{8}$; $\sqrt{a^3b^4}=b^2\sqrt{a^3}$	23	15.9
33	Error in factoring; perfect square factor correct, other incorrect: $\sqrt{32}=4\sqrt{4}$; $\sqrt{50}=5\sqrt{5}$	4	2.8
34	Does not multiply numerator by rationalizing factor: $\sqrt{\frac{1}{3}}=\frac{1}{3}\sqrt{3}$	8	5.5
35	Failed to take square root although factoring correctly: $\sqrt{x^5y^3}=x^4y^2\sqrt{x}$	2	1.4
36	Factored correctly, took square root correctly; placed radical sign over wrong factor: $\sqrt{a^2b^4}=\sqrt{a^2b^2}\cdot a$	4	2.8

Digitized by Google

TABLE VI—*Continued*

No. of Error	Tests	I No. Pupils Making Error One or More Times	II Percentage of All "Recurring Errors"
	TEST X		
3	Error in writing	4	2.5
8	Inability in specific operation tested	12	7.5
20	Errors in use of signs in transposition	4	2.5
22	Error in division, result inverted: e.g., $V=lwh$, $w=\frac{kl}{V}$	44	27.3
24	Incomplete	1	0.6
37	Transposing factors instead of terms: $V=Lwh$; $w=V-Lh$	12	7.5
38	Interchanged factors of both sides of equation: $E=\frac{PL}{K}$; $P=\frac{EL}{K}$	30	18.6
39	Error in selecting coefficient of the unknown in $L=\frac{Mt-g}{t}$, $M=\frac{Lt}{t-g}$ (considers $(t-g)$ as coefficient of M)	51	31.6
40	Divides a term of numerator by the denominator: e.g., $L=\frac{Mt-g}{t}=M-g$	3	1.9
	TEST XI		
1	Arithmetic errors: $3\cdot 21=73$	25	50
1a	Arithmetic errors of the type $n\cdot 0=0$	1	2
3	Errors in writing	4	8
8	Inability in specific operation tested	3	6
19	Multiply only one side of equation by L.C.M.	2	4
20	Error in use of signs in transposition: $6x-4=10$; $6x=6$	3	6
23	Multiply numerator by denominator in clearing fraction	1	2
24	Incomplete (e.g., $-y=-3$)	2	4
41	Errors in use of signs in subtraction: $\begin{cases}10x-15y=65,\\10x+6y=78;\end{cases}$ $-9y=-63$	4	8
42	Errors in use of signs in division: $-12x=24$; $x=2$	1	2
43	Adds left member, subtracts right member or vice versa: $\begin{cases}4x+2y=20,\\3x-2y=1;\end{cases}$ $7x=19$	3	6
44	Adds corresponding members when he should subtract: $\begin{cases}2p+10q=54,\\2p-3q=2;\end{cases}$ $7q=52$	1	2

We may dispose once for all, of the error marked No. 8 in each test, "positive inability in the specific operation tested."

Digitized by Google

We give below the percentage of all errors that were made, which show inability to use the operation in question in each test.

Tests	Percentage	Tests	Percentage
2	20	7	21.6
3	4.4	9	60.6
4	39.4	10	7.5
5	17.7	11	6
6	15.3		

This table reveals that there is a very large number of our pupils that are absolutely unable to handle certain combinations of the following operations: special products, factoring (complete quadratic), fractions, exponents, quadratics, and radicals. This percentage, it should be noted, may be deceptive, for in some cases it includes only a small proportion of all errors made. It is striking at least as showing the cases in which positive inability to do the problems stood out.

Test III. *Substitution.*—Relatively few errors. Of those that were made, nearly one-third are due to "squaring product of literal factors instead of one designated." Practically half of all errors are arithmetic.

Test IV. *Factoring.*—Thirty-nine per cent of all recurring errors show positive inability to factor particular types of factoring problem (mostly complete quadratics). The outstanding errors are found to be error numbers 14, "factors such that sum of cross-products is incorrect," and 16, "failure to recognize monomial factor."

Test V. Errors in the use of signs again predominate, e.g., in addition and in multiplication failure to change signs if numerator is preceded by $-$ sign. Also need for emphasis on multiplying both sides of equation by L.C.M.

Test VI. There are three outstanding errors in the use of exponents—incorrect use in involution (adding instead of multiplying, raising to power instead of multiplying, and failure to raise to required power). There are other scattering errors which recur rather frequently.

Digitized by Google

Test VII. Pupils are prone to find only one root. Their most outstanding mistake again is in cross-products—getting factors such that sum of cross-products is incorrect.

Test IX. Sixty per cent of all recurring errors show positive inability to handle particular kinds of radicals, e.g., of the type $\sqrt[3]{2}$ especially. Of the other recurring errors, pupils commonly leave factor of same power as degree of radical. They also do not multiply numerator by rationalizing factor.

Test X. Three typical recurring mistakes: (1) errors in division, results inverted, e.g., in $v=lwh$, $w=\frac{hl}{v}$; (2) interchanging both sides of the equation; (3) errors in selecting coefficient of the unknown, e.g., in $L=\frac{Mt-g}{t}$, $M=\frac{Lt}{t-g}$, pupil considers $(t-g)$ as coefficient of M.

Test XI. Aside from purely arithmetic errors, the solution of simultaneous equations of the type represented here has been rather well automatized. Errors in use of signs stand out again. We would like to call particular attention to the frequency of recurrence of errors in the use of signs in all tests where they are possible.

Methods of "differentiated" drill will improve instruction in the formal processes.—The giving of standard tests is only a first step in the program of improving instruction. The tests, however, if corrected by the teacher will lead to definite knowledge as to the types of problems upon which she needs to drill her pupils. Great insight can be obtained by the teacher into the difficulties of her pupils if she will take the trouble to examine the tests carefully and classify the mistakes made. Typical recurring ones will stand out clearly and these she can drill upon *in a differentiated way.*

The working out and giving of the Standardized Tests have offered the writers an opportunity to extend their service to teachers of algebra with a thoroughgoing and complete classification of the recurring errors made by pupils. The tabulation and discovery of errors are being followed up by the careful design of drill exercises to aid in the elimination of the weaknesses in learning. This in turn is being supplemented by thorough experimentation to

Digitized by Google

determine the frequency with which particular operations should be drilled, the distribution of the different types of arrangement in the different exercises, best ways of presenting material, etc. Thus the fifth step in our program has just been taken.

We are now organizing a thoroughgoing experiment in the Parker High School, Chicago, and in a group of co-operating high schools in and about Chicago, in the attempt to do the things outlined above. Practice exercises have been organized in a tentative way, separate exercises for each operation.[1] Those exercises have emphasized the most frequently recurring errors roughly in proportion to their difficulty.

From this point on real progress in improving algebra instruction can be made only by teachers of the subject working in their classrooms. We urge, therefore, the undertaking of a very thorough co-operative experiment by teachers of algebra along the lines marked out by this report. We wish to enlist the co-operation of all teachers interested in the attempt to improve the teaching of algebra along the lines suggested herewith. A definitely worked out experimental plan of trying out various ways of teaching algebra will be mailed to anyone interested enough to take part in a co-operative way. Complete records of the conduct of the experimental work will be kept and reported in the pages of this journal next year.

[1] Sample sets of practice exercises with prices may be secured from H. O. Rugg, School of Education, University of Chicago. They will be sold at the cost of publication and handling.

Digitized by Google

EDUCATIONAL NEWS AND EDITORIAL COMMENT

Military Drill

In this number the *School Review* presents several important articles concerning military training in public schools. Local interest in the Middle West centers around an accomplished fact: the inauguration of the so-called "Wyoming plan" in several Chicago high schools, under the direction of Captain E. Z. Steever, of the United States Army, and an imposing corps of technically trained assistants. Other cities in the central military district may also decide to avail themselves of the same opportunity. School men will be glad to read Captain Steever's article which appears as the first number of the present issue. Captain H. L. Durborow, of Culver Military Academy, also speaks authoritatively of military education, especially in schools frankly given over to a far more rigid inculcation of that discipline than can reasonably be anticipated in public schools.

No less important are the two articles which, with due reservations, may be said to point out the negative side of the case. Leonard P. Ayres, of the Russell Sage Foundation, and D. C. Bliss, of the Montclair, New Jersey, public schools, are well qualified to represent conservative men who feel that the present time of stress is likely to overemphasize both the necessity and the real advantages of military drill. Moreover, educators who have not had occasion to read entire the admirable report of the Massachusetts Commission on Military Training will welcome the opportunity to see the portions of that report most pertinent to the immediate issue: namely, the testimony of several important witnesses, and the commission's final statement adverse to military training in the schools.

Finally, the article setting forth in compact form the essential features of national military service in France, Germany, Switzerland, Australia, Japan, and England, may be helpful to anyone who is conscientiously attempting to place himself right in one of the supreme questions of the hour.

BASIC CONSIDERATIONS CALLING FOR PREPAREDNESS

Underlying the entire discussion for preparedness there appears to be a series of fundamental truths which very few sane men dispute.

Digitized by Google

1. The isolation of the Peace Palace in The Hague, in a little country armed to the teeth to defend her neutrality, which either of the contending parties could, and possibly would, crush, if it were to their immediate advantage, is typical of the standing which peace conferences, international arbitration, and national treaties occupy in the world today.

2. The "splendid isolation" of our nation of 100,000,000 is a thing of the past. Three thousand miles of Atlantic Ocean have not been able to keep us from the verge of war, even though our councils have been led by a patience, forbearance, and endurance that speak for themselves. Indeed, before these words go to press, we may be, technically at least, at war.

3. Lulled by the foolish dreams of men in whose minds "a million men will spring to arms over night," we are almost totally unprepared. General Wood fittingly characterizes the situation: "A wolf was never frightened by a flock of sheep."

4. To meet this situation we need at once the large and efficient navy which we have on paper, but not available for action; we need also the power to raise and thoroughly equip against emergency a body of men proportionate to our size and potential strength. The woeful experiences of 1908 and 1916 stare us in the face.

5. We live in a world in which two large nations only, China and the United States, are inadequately armed for warfare. Moreover, it is a world in which good intentions are often ruthlessly trampled under foot. Large nations, even, may be called upon to swallow indignities which if endured in private life would stamp a man a craven.

No one knows the future. If, when peace comes, future wars are to be made impossible, those nations which are powerful will have a powerful voice. Against that time it would be highly becoming for the United States to have a military establishment ready for use, or ready for the scrap heap when assured world-peace comes.

BEARING ON MILITARY TRAINING IN SCHOOLS

In a spirit of an honest patriotism which would have the United States strong that she might become a more potential champion of the rights of all weak and oppressed peoples, as well as of her own, the *School Review* subscribes to a belief in the truth of the basic truths listed above.

Now a serious proposal for military drill in the public schools needs to face the vital fact that relatively very few schoolboys would be called

Digitized by Google

to arms, at the first call, in a time of crisis. A glance at the experience of European armies shows that men between twenty and thirty are the flower of fighting men. Again, the training given large groups of schoolboys could be nothing more than the simplest elements of the manual of arms, maneuvers, and handling of small arms, supplemented perhaps in a few cases by summer camps for more advanced experience. But modern warfare has rendered almost insignificant the use of small arms, and at best open field tactics are subordinate. In fine, however chagrined a serious American may be over our present impotency, we must not be stampeded into seeing a way out by giving a few tens or hundreds of thousands of schoolboys the elements of military drill.

For the present world- and national crisis military drill in the schools has little if any meaning. The gain to our actual fighting strength would be nil.

THE QUESTIONS UPON WHICH THE DESIRABILITY OF MILITARY DRILL RESTS

If, then, we must discard any idea that drill in the schools would furnish fighters for the present emergency, upon what other grounds, if any, can such training be justified?

1. If it becomes necessary for the United States to adopt a system of universal military service, could a reasonable portion of the training be interwoven with school life in such a way as to save boys time and the government money?

2. General Wood asserts that military training is not for war alone; that it is really a training for life. Is this true? Does or does not drill result in all-round better citizens because of habits of regularity, promptness, thoroughness, respect for constituted authorities, rights of others, the law, the flag, and the like?

3. It is generally admitted that military discipline is the very essence of obedience. Is President Eliot right in maintaining that subservience to rigid orders is least to be desired for young boys on the ground that it curbs their individuality? Even if this were true, can we in America afford to sacrifice a little independence of individual action in order to secure loyalty, steadiness, devotion, centering around love of country? Of course this question involves still another antecedent question: Could such drill as the public schools offer nurture these patriotic virtues?

4. Vigorously George P. Arps has voiced the argument that civilized nations have nourished the powerful inherited tendencies of destruction; that histories give space to brutal acts; that in "movies," in the press,

Digitized by Google

in pictorial weeklies, we "nurse the slow-consuming fire which ultimately rocks the temple of international justice." Is this true? Is it true that drill such as the schools could give would nourish that flame? Is it thinkable that our democracy could become enamored of war, even if we gave a large body of youths an impetus toward the military profession?

5. Sargent and others effectively reiterate one argument which, so far as the *School Review* knows, is seriously denied by no one. They say that military drill is far inferior to well-managed physical-training courses in developing sound and vigorous bodies. No one disputes their contention. But the real issue, as the *School Review* has often pointed out, is, What reason have we to hope that thorough physical-training courses will become general? If they should, would the boys be enthusiastic in carrying them through? For stronger bodies is military drill *better* than nothing? Might it not actually be true that drill can be made to have the virtues claimed for it by Captain Steever? These are the issues upon which a thoughtful man must decide before he makes up his mind to oppose or befriend military training for the schools. On every one there is room for difference of opinion; the differences are well exemplified in the earlier portions of this issue. The *School Review* is frankly somewhat skeptical of the outcome, largely on the ground that military training in the state universities is so generally regarded as a bore, to be slipped through as easily as possible. Nevertheless, we believe that Chicago and other cities should give the system a fair field with reasonable chances of success. Certainly no one could doubt either the sincerity of Captain Steever and his aids, or the unbounded enthusiasm of the high-school boys.

With one quite common idea there can be little patience. Too often today it is taboo to speak of national honor and patriotism. We are even told that we must not mention too loudly the services of Washington, of Lincoln, and of McKinley, because forsooth we are likely to kindle a militant spirit. Certain mothers in Chicago last fall instructed fifteen-year-old sons to stand near the polls and to say to each voter, "We don't want to go to war, we want to stay at home with our mothers." Maternal training like that will make mollycoddles, not manly men. We believe that it is possible to teach the Golden Rule without teaching retaliation, and that America can teach manly chaps to dig a trench, handle a rifle, march in brigades, fire a machine gun, and still teach them to abhor war, except when there is a wrong to be righted.

R. L. L.

Digitized by Google

The Columbia Laboratory in Curriculum

Of importance to all interested in educational methods is the establishment of a school in connection with Teachers College, Columbia University, for the purpose of constructive work in the reorganization of elementary and secondary education. The establishment of the institution is the direct outcome of extended discussion of President Eliot's paper on "Changes in Secondary Education" and Abraham Flexner's paper entitled "The Modern School." The aim of the school will be to fit the school curriculum to the needs of modern life.

The prospectus outlines immediate departures from the established curriculum. Modern languages, English, French, and German will be stressed with a view to practical results. In connection with history, civics, and literature, experiments will be made to test the effective use of classics in translation. Latin and Greek will not be offered in the schools. Science, industry, and domestic arts will be stressed throughout the course with increased attention to music, drawing, and art. By means of contact with the natural industrial, economic, social, vocational, and domestic environment, the school hopes to create real situations for its pupils. The school will frankly discard "formal discipline" and will undertake to train its pupils through first-hand and immediately applied experience.

The board of education has been particularly fortunate in the choice of a director, Professor Otis W. Caldwell, formerly head of the Department of Natural Science in the School of Education of the University of Chicago. Professor Caldwell brings to the institution a wide range of experience in elementary school, high school, normal school, and university. He is well known to the public as the author of important books dealing with botany and general science for use in secondary schools, and is the editor of leading textbooks in agriculture for secondary schools.

This type of experimental school in connection with leading universities is rapidly superseding the traditional theoretical normal school. The curriculum of the elementary and secondary school is of absorbing interest. Not often is an opportunity afforded to work without the hindrance of tradition or the prejudice of custom. In the Columbia school the slate is clean; the factors for experiment are complete; hence the results of the laboratory in curriculum conducted by Professor Caldwell and his associates will be attended with great interest.

Digitized by Google

Brains versus Beauty

Something just a little more than a tempest in a teapot has been raised by the accusation of Mrs. Florence Vosbrink, member of the Chicago school board. Mrs. Vosbrink charges that certain high-school principals select the women on their staffs on specifications of youth, figure, and beauty, rather than experience, ability, and brains.

This accusation raises two queries, so very closely related that they really amount to one and the same: first, is the charge true, and second, if it is true, is there any justification for the procedure?

The reply must be in the affirmative. School executives the country over are today considering as never before the personal appearance of candidates, especially of candidates for high-school positions. On this ground more than any other personal interviews with candidates are becoming the invariable rule. School principals would not be truly masculine if they did not prefer an attractive-appearing, neat, trimly dressed, fresh, vivacious young woman to one whose qualifications are the direct opposite. They do exert such preference, because they know boys and girls prefer beauty to brains.

This last statement needs explanation. "Beauty" in woman is not mere doll-like prettiness; and, thank fortune, it is not synonymous with "youth." Beauty is all that rich and wholesome attractiveness which any woman of any age ought to know how to cultivate. On the other side "brains" is too often taken, as Mrs. Vosbrink in this one case seems to have interpreted it, to mean mere intellectual capability. We say that school men are sensible enough to know that brains ought to mean far more for any woman. In short, if a woman has brains enough to teach in a school, she ought to have brains enough to be an attractive woman personally. She could be if she had brains enough.

Of course life is hard for the ungifted. A homely, slatternly, stringy-haired, unbuttoned, unkempt creature has no place in the classroom. She hasn't brains; she isn't gifted; at any rate she isn't a model of the womanliness we want our girls to imitate and our boys to admire. She may have several degrees and dangle with a black string about her neck a Phi Beta Kappa key, but she has not womanly brains. Qualities of personal untidiness are consummate proof that she has not woman's supreme qualification, lovable, womanly attractiveness, best summed up in the term "wholesomeness." If a school executive employs such an individual, he is guilty of even a less excusable fault than the college executive who employs a bookworm, not a real man.

Digitized by Google

An Innovation in Supervised Study

Principal Carl H. Nielson of Vallejo, California, writes us of an interesting innovation in supervised study, having two quite distinct features. In the first of these the teacher meets individual pupils who have fallen behind in her classes; in the second she teaches the group as a whole how to study.

Of the seven daily periods each teacher is required to set aside one, known as "the deficiency period." Every pupil who has dropped behind must go to his instructor, whenever she directs, during this deficiency period. Moreover, these periods take precedence over other class meetings; in other words, if Boy A is behind in Algebra, he may have to leave an English class in order to attend the deficiency period of his algebra teacher. The confusion which might naturally be expected from such a plan, Mr. Nielson writes, is largely avoided by careful supervision by the office and by hearty co-operation on the part of all the teachers.

The second distinctive feature of the Vallejo system is the opportunity every teacher has to teach her classes as groups how to study. This is accomplished by adding one period to the school day. The school opens at 8:15 instead of 9:00. The first 45 minutes throughout the entire building are directed study-periods, managed as follows:

> At 8:15 the pupils go on Monday morning to their respective rooms for the regular 9:00 o'clock recitations. There they receive instructions as to the proper method to pursue in studying the lessons in these particular subjects for the next two weeks. On Tuesday at 8:15 (the regular supervised study-period) the pupils having recitations during the second period in the morning are given instructions as to the best manner of preparing their lessons in these subjects for the next two weeks. On Wednesday the pupils at 8:15 are instructed in the best way to study the subjects of the third period for the two ensuing weeks. This process is continued through the entire program of seven recitation periods, and is repeated each fortnight.

Our correspondent adds two points of interest: First, the difficulty giving most trouble is the inevitable tendency to make the supervised study-period nothing but one more recitation in the same subject. This of course defeats the purpose of the experiment; the Vallejo teachers are gradually learning how to avoid the natural inclination. The second point is too long to quote in full. It consists of a startling set of figures showing the improved standing of the entire student body under the twofold plan, which enables each teacher both to reach personally all her weak pupils, and definitely to guide the study of her classes as units.

Digitized by Google

A New Field for the College Man

The opening of the college year is always attended with uncertainties. The year 1914–15 brought a surprise quite unlooked for by the faculties of many institutions. There was a falling off in the German classes varying from 20 to 50 per cent, and a similar shrinkage in the French department, though in the case of the latter the decrease was not so marked; on the other hand, in many instances the classes in Spanish increased almost 100 per cent. Evidently the student body was looking toward an Eldorado in South America.

Quite in line with this tendency is the report of Mr. F. C. Schwedtman, director of efficiency in the National Bank of New York City, concerning "An Experiment in Practical Commercial Education in the National City Bank," published in the December issue of the *Journal of the National Education Association*. The bank, under normal conditions, employs at its home institution about one hundred clerks. Since the outbreak of the war branch offices of the National City Bank of New York have been opened in foreign countries so rapidly that the bank is no longer able to depend upon the advancement of experienced and trusted employees. The outcome should be larger opportunities for experienced bankers in small towns; but in this crisis, it is interesting to note that the call has come for the college man. The reasons for this discrimination are very significant in the educational as well as in the business world. In speaking of his confidence in the experiment made with college men a year ago, Mr. Schwedtman says:

> It is true that most of these young men could hardly add a column of figures, that their writing was merely a scribble, and that their knowledge of banking was decidedly lacking. Their enthusiasm and keen young minds, however, overcame obstacles imposed by lack of practical training, and their fine college-instilled spirit of sportsmanship and their splendid team work not only established the reputation of the college man, but brought into the bank an atmosphere that is of material aid in improving the spirit of the institution.

Encouraged by the success of the experiment made last year, the bank has selected forty young men from sixteen universities for further business enterprise. With these new recruits there has been inaugurated a plan which, if successful, will tend toward closer co-operation between the university and business, a closer connection between the theoretical and practical training of young men for commerce—both domestic and international.

Digitized by Google

The bank hopes to establish fellowships in conjunction with various universities and colleges, whereby students who have completed one year of practical work in the bank, together with certain academic courses, shall be granted one year's credit toward the degree for which they are candidates.

Naturally enough the National City Bank wants selected men. Yet the scheme is sufficiently flexible to allow candidates to go into the work as early as the Sophomore year or during the summer vacation in order to test their fitness for the vocation. The plan is a wise one. Whether the universities continue to offer "a gentleman's education" or not, there is no gainsaying the fact that the commercial and industrial growth of our country depends upon our educated men.

E. M. G.

A Survey of the Higher Educational Institutions of Iowa

In the first of an important series of state educational surveys made by the Federal Bureau of Education, a new principle in higher educational administration is laid down which it is believed will be of real significance to the future of education in the states. This is the so-called principle of "major and service lines." It is offered as a solution to the problem of duplication of professional courses by two or more state institutions of higher education in Iowa and a number of other states.

By the principle of "major and service lines," as described in the bulletin just issued on *Higher Educational Institutions of Iowa*, each state educational institution has assigned to it certain "major" fields which it may develop to the fullest extent. "Service" lines are such subordinate subjects as are essential to the proper cultivation of a "major" line. For example, agriculture at the Iowa State College of Agriculture and Mechanic Arts is a "major" line, and English a "service" line. On the other hand, English is described as a "major" line at the State University and a "service" line at the State College. On this principle no state would attempt to maintain two or more extensive and elaborate educational plants doing the same type of special work in the same field, and no institution would duplicate the work of another except to the extent that such work is necessary to the main task of the college.

The government's survey of the Iowa state higher educational institutions was made at the urgent request of the Iowa State Board of Education for expert information in meeting the problems that arose in appropriating the necessary money for the institutions of the state.

Digitized by Google

BOOK REVIEWS

The Prometheus Bound of Aeschylus. By MARION CLYDE WEIR. New York: Century Co., 1916. 12mo.

This is a conventional, but convenient and readable, translation in blank verse, with the lyrical passages done into English rhymes. To enter the lists against so consummate a poet as Mrs. Browning is very bold, and the issue scarcely doubtful. With Mrs. Browning away, perhaps higher words of praise might be found.

In testing a translation of the *Prometheus* one inclines instinctively to turn first to the Titan's sonorous invocation of nature at the moment when his tormentors have left him bound to the desolate rock. A comparison of renderings is not reassuring. One line of Mr. Weir's set beside the corresponding verse of Mrs. Browning is enough to show that he has not tallied an advance. For Mrs. Browning's

> O holy Aether, and swift-winged winds,

Mr. Weir has

> O divine Ether and swift-winged winds.

This is no gain. Indeed, the change from "holy" to "divine" vitiates both rhythm and tone; "holy" seems almost inevitable, while "Ether" is an anodyne.

Of course, the juxtaposition of single verses is unfair. Suppose we compare Mr. Weir's translation of the throbbing anapests which follow Prometheus' invocation,

> Behold with what wickedness ground into dust
> Through the oncoming centuries wrestle I must
> Down the myriad years,

with Mrs. Browning's vigorous

> Behold, with throe on throe,
> How, wasted by this woe,
> I wrestle down the myriad years of time!

Not only is the former rendering more commonplace, but it is less accurate than the latter. To speak of nothing else, Mrs. Browning's "down" is adverbial; Mr. Weir's preposition is weaker, as well as farther from the Greek. Searching with the best of predispositions, the present reviewer fails to find a passage of Mr. Weir's which reveals a poetic grandeur comparable with any one of many in Mrs. Browning, or, say, of Byron's paraphrase of the second choral ode.

Digitized by Google

In the main the versification is smooth, but resolutions and hypercatalectic verses are too frequent for entire comfort. Such lines as,

> But they returned bringing back oracles,

and,

> Hearing me through still further wilt thou marvel,

must be styled careless, if not worse. Whether the flavor of Greek lyric can be reproduced in rhymed verse may be a matter of opinion and taste, but rhyme must be careful. Little short of reprehensible is a rhyme like this:

> Through others' wild resentment thus brought low;
> And who of all the ill-starred race is so
> Wretched as I?

The question, however, which the reader of the original must answer is this: "Do you feel that this translation is a faithful transcript?" In this instance the reply must be in the negative. But, for that matter, neither is Mrs. Browning's satisfactory. She is complex; Aeschylus is simple and straightforward. She has a grand style; Aeschylus is far grander. Truth is, he cannot be reproduced, and one is not to be blamed for having failed to accomplish the impossible.

Mr. Weir remarks in his preface that he had hoped to develop for the choruses "a form that would closely approximate the rhythms of the original, but after experimenting gave up the design." One might wish that he had persevered in the attempt. Arnold has shown that the only feasible method of translating Homer is to reproduce the hexameters. Success with the tragedy, in the opinion of the reviewer, must eschew blank verse and rhyme, and proceed along the same line as is suggested by Arnold. Mr. Weir expresses the justifiable conviction "that most of the complicated Greek meters and rhythms could be reproduced in English if a man of leisure and learning should undertake the task with sufficient diligence and enthusiasm." All that needs to be added to these four qualities is "genius."

A poem's baldest meaning may be carried over even by a prose translation, but not the subtle flavor which is the real essence. This inheres partly in the form. A translator must be content either to have constructed another genuine poem on the same theme, like Pope's *Iliad* or Browning's *Alcestis*, or else he must find some means of taking over both sense and form. The task seems hopeless, but the experiment would be worth while. An attempt to do the impossible is always inspiring, even though it be superogatory.

C. H. WELLER

STATE UNIVERSITY OF IOWA

Applied Latin: A Course for Beginners. By W. H. FREEMAN. Milton, Pa.: Weidenhamer & Co., 1916. Pp. 344+xliii.

For more than a quarter of a century most makers of first Latin books have consciously or unconsciously followed the standard set by such books as Collar and Daniell's *Beginner's Book*, published in 1886. The method followed

Digitized by Google

in these books can be described as the piecemeal grammar-translation method, the plan being to have the pupil translate, beginning at the first lesson, Latin-to-English and English-to-Latin sentences, based on a limited set of forms and vocabulary. The fifty or so "First Books" that have followed this model have varied from it chiefly in the selection of paradigms, and in the size of the pieces and the order in which they are administered. Of course each new text has had its "special features" which its author had found helpful in his own teaching and which made it seem worth while for him to add one more to the long list of available texts. There have been some authors who have reverted to an earlier type of grammar-translation book in which the emphasis is placed on *grammar*, and in which all of the more important paradigms are to be summarized before the pupil is allowed to read or write any Latin. Such a book is *Bennett's Foundations*, published in 1898. On the other hand, there have appeared more recently the direct-method texts, such as Paine & Wainwaring's *Primus Annus*, and Chickering and Hoadley's *Beginners' Latin*, which emphasize the understanding of oral and written Latin without translation, and forbid the rote-learning of isolated forms and abstract rules of syntax.

These direct-method texts, and to some extent the piecemeal texts referred to above, represent the point of view that Latin is to be taught as a *language*. The value of Latin as an aid to English and other subjects in the curriculum is taken for granted, and considered only a sort of by-product, if not altogether neglected, in the training of the pupil to read and write Latin.

The author of *Applied Latin* is convinced that present beginners' books do not meet the needs especially of the great number of students who study Latin only two or three years. He has therefore arranged the subject-matter in *Applied Latin* with a view partly to the acquisition of a sound foundation in Latin, partly to a "correlation of Latin with things modern and vital." The author frankly says that translation from Latin to English and from English to Latin is to be a secondary matter compared with awakening a realization of the importance of a knowledge of Latin as an aid to the study of English. If one may judge by the order of presentation and prominence given in the text, translation is not even of secondary importance, but must yield to a study of English words, their spelling, and their derivation from Latin; English grammar; Latin vocabulary (selected for its importance in furnishing root-words in English); Latin forms and rules of syntax; drill exercises on case-meaning or verb-forms in isolated Latin words; and "inter-chapter" digressions on ancient geography, history, and customs. Each of these topics is treated at greater or less length before there is offered any matter for translation. The first complete Latin sentences to be translated occur on p. 46, and these are little more than drill exercises on forms of the verb, which important part of speech is first taken up at this point. The noun, the preposition, and the adjective have been previously treated, but without so much as an "est" to make sentences possible. As a matter of fact, translation other than

Digitized by Google

that of isolated sentences to illustrate the rules or forms being presented is not found until one reaches p. 281, from which point to the end of the book there are occasional selections, beginning with the story of Creation. On pp. 310 to 315, at the very end, are given without notes the first eight chapters of Caesar's *Gallic War*.

As a substitute for translation in earlier work, the author uses such a doubtful device as the following, first found on p. 15: "In the following sentences repeat the Latin word whenever you see its English meaning: 1. My *daughter* walked through the *forest*. 2. The *road* takes an *hour*." Similar sentences follow calling for Latin nouns already known, but involving case relations as yet unknown to the pupil, inasmuch as only the nominative case has been supplied in the Latin word lists.

Another plan, less culpable, but hardly deserving the name "translation," is the following, found on p. 27, in connection with the author's treatment of the preposition: "Translate these sentences, noting the use of the preposition and the cases which follow them: 1. We advanced *ad fossam*. 2. They fled *ante fugam*," Similar English sentences follow containing Latin prepositional phrases.

That the author has considerable difficulty with the concept "translate" is illustrated by this naïve statement found on p. 25, where he is discussing the difficulties which confronted the young Roman in understanding his own language: "For instance, in reading, the cases spelled with exactly the same letters were very hard for the ordinary Roman boy to *translate*. Some cases, like the ablative, had more than one possible *translation*." [The italics are the reviewer's.]

From the foregoing quotations and examples, it will be seen that the author's point of view is directly opposite to the commonly accepted view that the reading, translating, and writing of Latin should accompany, if not precede, drill on forms or vocabulary. His conception of the chief aims of Latin study will doubtless meet with acceptance among the advocates of vocational Latin, for whom *Applied Latin* might prove a valuable text. The classified lists of nearly a thousand Latin derivatives used in modern school and business life will be found especially helpful. Considering the great stress placed on the use of Latin as etymological material, one wonders why the author has not advocated the use of the English pronunciation exclusively, or at least offered it side by side with the Roman pronunciation adopted. The rules for the English pronunciation of Latin cannot be taken for granted.

In terminology the author is unaffected by the report of the Joint Committee on Grammatical Nomenclature. Both the terms and the definitions employed in dealing with the facts of English as well as of Latin grammar are often inaccurate or inadequate. Examples are: "Simple sentences contain but *one subject* and *one predicate*" (p. 14). "Ordinarily *I, you, we* are included in the forms of the Latin verb, but when the subject of the sentence is *he, she,* or *it*, this subject is regularly expressed; as *poeta laudat, he*, namely, *the poet*,

Digitized by Google

praises" (p. 45). "English sentences follow the *natural* word order" (p. 52). "In (Latin) dependent clauses the verb is usually a form not of the indicative but of the subjunctive mood" (p. 109). "Since the subjunctive mood lacks the *firmness*, *frankness*, and *assurance* of the indicative, it is naturally used in most dependent (weaker) clauses" (p. 161). Elsewhere (p. 44) he speaks of the subjunctive as the mood, not of facts, but rather of possibilities. He seems unaware of the very common force of the subjunctive both in English and in Latin which most modern Latin grammars call "volitive." His general advice to the pupil is to ignore the subjunctive. He says on p. 162: "The subjunctive in English regularly employs the auxiliary verbs (*may*, *might*, etc.), but in Latin they are used in the translation of purpose clauses and of one or two conditional clauses *only*. Unless specially directed to the contrary, translate the present subjunctive in Latin like the present indicative, the imperfect subjunctive like the imperfect indicative, etc."

The book presents a rather monotonous style of typography. There is no break for "Lessons," the matter being presented continuously by sections which are numbered consecutively. There is no variation in the size of the type used except in the giving of word lists, paradigms, or exercises for drill.

There are two full-page illustrations of scenes from modern Rome, and four full-page maps to be used in connection with the eighteen "inter-chapter" digressions. Two of these maps are unfortunately misplaced in the edition which I have before me.

W. L. CARR

SCHOOL OF EDUCATION
UNIVERSITY OF CHICAGO

Fundamentals of French: A Combination of the Direct and Grammar Methods. By FRANCIS R. ANGUS. Henry Holt & Co., 1916. Pp. 180.

The text consists of an eighteen-page introduction devoted to pronunciation. Part I contains thirty-four lessons, covering sufficient material for a very full first-year course. One may judge of the practical character of the vocabulary from the titles of the lessons; i.e., "Vêtements," "Parties du Corps," "La Famille," "Sports," "La Maison," "L'heure," "Au restaurant," etc. The last lessons consist of selections from *Le petit chaperon rouge*, *Cendrillon noiraud*, *Le Tour du Monde*, and *Les Trois Mousquetaires*. Part II contains a grammar résumé, vocabulary, etc.

The excellent introduction furnishes the beginner with ample and valuable information regarding French pronunciation. The unusual clearness and thoroughness of the exposition is to be praised; but unfortunately phonetic considerations cease here, for from this point on there is not a word regarding pronunciation, not a phonetic symbol, nothing to make practical the theory so excellently begun.

Digitized by Google

As to the method, it is by far the most skilful combination of the direct and grammar methods which has come under our observation. In this text the direct method has the upper hand, in striking contrast with some recent texts in which the devices of the direct method were used as a sugar-coating for the grammar. The work demonstrated by gestures, objects, and the like advances by question and answer, thereby promoting vivacity. The various phases of the student's life are covered. From this vocabulary emerges naturally and inductively what grammar is necessary. The grammatical facts are stated concisely at the bottom of each page in small type.

There seems to be insufficient preparation for written work, but the skilful teacher can easily supply this deficiency. Though the material may have been handled in too mature a way—experience will tell—yet there is no doubt that this book represents a valuable contribution to our progress toward the inevitable ascendency of the direct method.

ARTHUR G. BOVÉE

UNIVERSITY OF CHICAGO HIGH SCHOOL

Plane Geometry. By EDITH LONG and W. C. BRENHE. New York: Century Co., 1916. Pp. 273. $1.00.

The book begins with a short history of the development of geometry which should prove helpful to the student in grasping the practical and logical nature of the subject. This is followed by the excellent method of introducing geometric forms, i.e., the use of paper models.

Instead of making an entire chapter of construction problems, the authors have arranged the material so as to have the construction follow the theorems upon which the proof of the construction is based. However, the use of the protractor, one of which is inclosed in each book, is introduced in the beginning of the text, great emphasis being placed on careful drawings, which will assist the pupil in a logical apprehension of the subject.

A large portion of one chapter is devoted to the development of the method and form of the proof of theorems and exercises, all of which are brought out in clear explanations and analysis. These methods are finally used by the pupil in completing the proofs of the theorems and exercises when only the statements are given. The summary and questions at the end of each chapter give the pupil a frequent review of all the facts in the preceding chapter. This is another commendable feature of the book.

The union with algebra is arranged in carefully planned algebraic problems which require geometric figures and a knowledge of geometric facts. The relation to trigonometry is shown by the introduction of trigonometric functions in the chapter on ratio and proportion. Under the heading "Loci" is found co-ordinate geometry or graphical construction, which is another step toward the much-desired correlated mathematics.

Digitized by Google

The discussion of the incommensurable cases and the theory of limits is placed at the end of the last chapter, to be taken up at particular points or left till the end of the course.

ABIGAIL L. MCRAITH

Principles and Methods of Teaching. BY JAMES WELTON. Baltimore, Md.: Warwick & York, Inc. Pp. 677. $1.65.

Principles and Methods of Teaching, by James Welton, professor of education in the University of Leeds, is a thoroughly scientific presentation of the educational problems of the primary and secondary schools. No theory is advanced which has not had the advantage of expert opinion. Professor Welton explains in his preface that he has not trusted to his own feeling in subjects which he himself has not taught. For instance, the chapter on natural history was written by Mr. C. E. Moss, keeper of the herbarium at the University of Cambridge; and that on needlework, by Miss E. L. Melville, mistress of method in the Leeds City Training College. In all of the chapters the problems are broadly considered; no attempt is made to give detailed recipes for attaining specific results.

The general function of teaching, material of instruction, and form of instruction are discussed in their various psychological aspects in Part I. Part II deals with the specific application of educational principles to the subjects usually taught in the grades and in the high school.

As a whole the work is thoroughly sane. It is simple and direct in style and concrete in analysis and application. To each chapter is appended a brief bibliography.

Digitized by Google

BOOK-NOTES

(Detailed discussions of some of the following books will appear later.)

ABBOTT, E., and BRECKINRIDGE, S. P. *Truancy and Non-Attendance in the Chicago Schools*. Chicago: The University of Chicago Press, 1917. Pp. 472. $2.00.

A study of the social aspects of the compulsory-education and child-labor legislation of Illinois.

ALLEN, P. S. *An den Ufern des Rheins: Vom Bodensee bis zu den Niederlanden*. New York: Henry Holt & Co., 1917. Pp. 258.

The book is unique in material and treatment.

Annual Report of the Secretary of the Navy for the Fiscal Year. Washington: Government Printing Office, 1916. Pp. 143.

Annual Reports of the President and Other Officers of Purdue University for Year Ending June 30, 1916.

Contains a carefully organized list of Purdue publications for year 1916.

ARCHBOLD, MAURICE J. *A Laboratory Course in Practical Electricity for Vocational Schools and Shop Classes*. New York: Macmillan, 1916. Pp. 209.

This is a book very well adapted to the purpose for which it is intended. It presents the laboratory side of electricity in a practical way, bringing together theory and practical application in an admirable manner.

BAKER, E. K. (Compiler). *Short Stories and Selections*. New York: Macmillan, 1916. Pp. 263. $0.25.

The selections are fresh and interesting. Excellent models for narrative and descriptive themes.

BASSETT, LEE E. A Handbook of Oral Reading. Boston: Houghton Mifflin Co., 1917. Pp. 353.

Part 1 treats of clearness and meaning; Part 2, with Impressiveness; and Part 3, with ease and correctness. The chapter to teachers has many helpful suggestions for recitation and assignment.

BRADSHAW, G., and BURSTALL, SARA A. *The High School Cookery Book*. New York: Longmans, Green, & Co., 1916. Pp. 263. $0.60.

A scientific treatment of kitchen facilities and foodstuffs.

BURBACKER, A. R. (Editor). *Shakespeare's King Richard III*. New York: Macmillan, 1916. Pp. 200.

CHAMBERLAIN, JAMES F., and CHAMBERLAIN, A. H. *Oceania: A Supplementary Geography*. New York: Macmillan, 1916. Pp. 160. $0.55.

Digitized by Google

THE SCHOOL REVIEW
A JOURNAL OF SECONDARY EDUCATION

VOLUME XXV APRIL 1917 NUMBER 4

THE PROFESSIONAL READING OF THE HIGH-SCHOOL PRINCIPAL[1]

FRANKLIN W. JOHNSON
Principal of University of Chicago High School

Until recently the term professional training, if applied to high-school teachers, has been a misnomer. The best recruits to the ranks brought a formal mastery of one or more subjects, certified to by the optimistic heads of college departments whose sublime contempt for training in methods, if acquired at all, was the result of costly experiment upon the human material that fell helpless into their hands. The case was essentially the same with the principal. Callow youths, their college courses just completed, entered upon the duties of the principalship with no additional qualification except, perhaps, the promise of executive ability based upon their own self-assurance and conceit. Those whose early promise was measurably fulfilled by experience, or who developed an aptitude for practical politics, were promoted to higher positions, leaving their former places to be filled by others of the same sort.

But now, however, that the recent demand for efficiency has been extended to all forms of industrial and social enterprise, the schools are in for an overhauling. The inadequacy of the traditional curriculum to meet modern social demands, and the inefficiency of methods of instruction and administration have been

[1] A paper read before the University of Illinois Secondary-School Conference.

Digitized by Google

brought to light. And now suddenly we school principals find ourselves confronted with a new vocabulary consisting of such terms as individual differences, normal distribution curve, motor control, reflective thinking, etc., which we must learn in order to save our faces, to say nothing of our jobs. The zeal with which we flock to the centers of learning and spend the heated term in pursuit of knowledge of which we have never before felt the need indicates that we are awake to the gravity of the situation.

Along with all this we have come to realize that the functions of a principal include something more than sitting in a swivel chair and dispensing discipline to recalcitrant pupils and parents, making out programs of recitations for the subjects of a traditional curriculum, and keeping the records of the school. We have found that some of our accustomed tasks can be better done by a fifteen-dollar clerk, some can be delegated to other members of the teaching staff with benefit to all, and some do not need to be done at all. A knack for getting on with people in settling or avoiding difficulties and a facility in the performance of routine office tasks are coming to have relatively less importance, while the interpretation of the modern social demands in terms of curriculum, materials, and methods of instruction which shall function in actual life experience has become of paramount importance. The principal must no longer be a mere craftsman, but a professionally trained leader of the teaching staff, and in matters of education he must share with the superintendent the responsibility of leadership of the entire community.

The new demands upon the principal require a breadth of reading and experience which few have had, but all must strive to attain. Until recently the literature of education has been in the form of a philosophy whose implications have been too vague for application in actual school procedure, or of a methodology which has found its application only in the practice of the elementary school. The last ten years, however, have been marked by the publication of a wealth of material dealing with the secondary school which is quite appalling to the principal who feels the need of mastering the literature of his calling. Some of this is of excellent quality, some is hardly worth reading, but all of it indicates an attitude that is full

Digitized by Google

of promise. The high cost of paper is likely to check the flood temporarily, so that we need not utterly despair of finding our bearings. What we need just now is a pilot to chart the course.

In undertaking to prepare a bibliography which he could confidently recommend as including the books which every principal should read and excluding those of merely ephemeral value, the writer was at once struck with his inadequacy to the task. His experience in preparing the following bibliography leads to the conclusion that no single person is able to prepare such a list. A number of men whose work lies in the field of secondary education in universities in various parts of the country were asked to submit lists of ten or fifteen books which they regarded as most valuable for the professional reading of high-school principals. Eight men submitted such lists, one each from the following universities: Chicago, Columbia, Harvard, Illinois, Iowa, Minnesota, Pittsburgh, and Wisconsin. Three of these named more than fifteen, one named only nine. Some of the titles included more than one volume. All the titles suggested have been included in the list. As might be expected, the lists submitted indicated what might be called institutional preferences. In the request for recommendations no reference was made to educational journals. The emphasis placed upon these in some of the submitted lists indicates that they are regarded as extremely valuable and would doubtless have received further recommendation had their inclusion been suggested. One said, "I feel that the best books in secondary education for principals of high schools are the volumes of the *School Review*."

The material has been roughly classified under ten heads. The titles under each head are arranged in order of the number of choices assigned to each; those receiving one choice are arranged in alphabetical order. The publisher's name, date of publication, number of pages, and net price are given in each case. A brief bibliographical note is appended with each title and is intended to suggest the content or distinctive method of treatment of the book.

Several significant facts appear in this bibliography. The large number of titles indicates the difficulty of selecting from the available material what is of most value. There are sixty-two different

Digitized by Google

titles including in all ninety-one books and journals. In four of the main divisions there is pretty general agreement on the most important books: Dewey's *Democracy and Education* (5), Judd's *Psychology of High School Subjects* (6), Johnston's *Modern High School* (7), Monroe's *Principles of Secondary Education* (7), Parker's *Methods of Teaching in the High School* (7). Davis' *Social and Moral Guidance* (3) is the only book receiving more than one choice in the group on "Industrial Education and Vocational Guidance." The field of administration has more titles than any other, fourteen in all, of which two receive seven choices each, and eight others receive two or more choices each. Division 4, composed of books dealing with the history of secondary education or with foreign secondary schools, contains four titles with two or three choices each. Another noticeable fact is revealed by the dates of publication showing that all but four of these books have been written within the last ten years, most of them within the last five years.

1. PRINCIPLES OF EDUCATION

(5) Dewey, John. *Democracy and Education.* Macmillan, 1916. Pp. 434. $1.40.

An introduction to the philosophy of education. The author "endeavors to detect and state the ideas implied in a democratic society, and to apply these ideas to the problems of the enterprise of education."

(1) Bagley, W. C. *Educational Values.* Macmillan, 1911. Pp. 267. $1.10.

The controls of conduct; the classification of functions and values.

(1) Bolton, F. E. *Principles of Education.* Scribner, 1910. Pp. 790. $3.00.

The author "assembles the main, well-tested results of the scientific study of education from the psychological and biological viewpoints and presents them in a way which secures continuity, correlation, and a unified interpretation of them."

(1) Moore, E. C. *What Is Education.* Ginn, 1915, Pp. 357. $1.25.

A discussion of some of the fundamental presuppositions of education.

2. PSYCHOLOGY

(6) Judd, C. H. *Psychology of High School Subjects.* Ginn, 1915. Pp. 515. $1.50.

A practical application of psychology to the materials and methods of high-school instruction.

(1) Ames, E. S. *Psychology of Religious Experience.* Houghton Mifflin, 1910. Pp. 428. $2.50.

Chapters xi–xiv deal with the psychology of adolescence.

Digitized by Google

(1) Angell, J. R. *Psychology.* Holt, 1905. Pp. 402. $1.50.
An introductory study of the structure and function of human consciousness.

(1) Calvin, S. S. *The Learning Process.* Macmillan, 1911. Pp. 336. $1.25.
The psychology of learning as related to the theory and practice of elementary and secondary education.

(1) Dewey, John. *Interest and Effort in Education.* Houghton Mifflin. Riverside Educational Monographs. Pp. 102. $0.60.
Discusses types of interest and their place in the theory of education.

(1) Hall, G. S. *Adolescence.* Appleton, 1904. Vol. I, pp. 589; Vol. II, pp. 784. $7.50.
The psychology of adolescence and its relations to physiology, anthropology, sociology, sex, crime, religion, and education.

(1) Thorndike, E. L. *Psychology of Learning.* Teachers College, 1913. Pp. 452. $2.50.
An experimental study of the learning process.

3. ADMINISTRATION

(7) Johnston, C. H. *The Modern High School* (rev. ed.). Scribner, 1916. Pp. 847. $1.75.
The administration and extension of the high school with examples and interpretation of significant movements. Contains extensive bibliography.

(7) Monroe, Paul (editor). *Principles of Secondary Education.* Macmillan, 1914. Pp. 790. $1.90.
Contains twenty-one chapters by the editor and other specialists on the history, organization, and materials of secondary education.

(4) Johnston, C. H. *High School Education.* Scribner, 1912. Pp. 555. $1.50.
Contains chapters by the author and several others on the history, organization, and materials of instruction of the high school.

(3) Cubberly, E. P. *Public School Administration.* Houghton Mifflin, 1916. Pp. 479. $1.75.
A statement of the fundamental principles underlying the organization and administration of public education.

(3) King, Irving. *The High School Age.* Bobbs-Merrill, 1914. Pp. 233. $1.00.
Discusses the physical, mental, and social characteristics of adolescence in their relation to the organization and activities of the school.

(2) Hollister, H. A. *High School and Class Management.* Heath, 1915. Pp. 314. $1.25.
Administration and technique of teaching in the high school.

Digitized by Google

(2) Russell, W. F. *Economy in Secondary Education.* Houghton Mifflin, 1916. Riverside Educational Monographs. Pp. 74. $0.35.
Causes of waste discussed, and comparison with foreign schools.

(2) Stout, J. E. *The High School.* Heath, 1914. Pp. 322. $1.50.
Treats of the function, organization, and administration of the high school.

(1) Davis, C. O. *High School Courses of Study.* World Book Co., 1913. Pp. 172. $1.50.
A constructive study applied to New York City.

(1) Hollister, H. A. *The Administration of Education in a Democracy.* Scribner, 1914. Pp. 383. $1.25.
Deals with school administration, with democracy as a unifying principle.

(1) Morehouse, F. M. *The Discipline of the School.* Heath, 1914. Pp. 342. $1.25.
Deals with the theoretical and practical aspects of school discipline.

(1) Sachs, Julius. *The American Secondary School.* Macmillan, 1912. Pp. 295. $1.10.
A discussion of the aims and methods of public and private secondary schools with frequent reference to the practices of foreign countries.

(1) Strayer, G. D., and Thorndike, E. L. *Educational Administration.* Macmillan, 1913. Pp. 391. $2.00.
An application of scientific method to the studies of students, to the teaching staff, organization of schools, and school products.

4. HISTORICAL AND COMPARATIVE

(3) Brown, E. E. *The Making of Our Middle Schools.* Longmans, 1902. Pp. 547. $3.00.
An authoritative and exhaustive treatment of the history of secondary education in America.

(3) Farrington, F. E. *French Secondary Schools.* Longmans, 1910. Pp. 450. $2.50.
An account of the origin, development, and present organization of secondary education in France.

(3) Russell, J. E. *German Higher Schools.* Longmans, 1910. Pp. 455. $2.50.
The history, organization, and methods of secondary education in Germany.

(2) Learned, W. S. *The Oberlehrer.* Harvard University Press, 1914. Pp. 150. $1.25.
A study of the social and professional evolution of the German schoolmaster with application to conditions in American schools.

Digitized by Google

(1) Brereton, C. *Studies in Foreign Education.* Houghton Mifflin, 1913. Pp. 302. $1.60.

A comparative study of French, English, and German secondary schools.

5. METHODS OF TEACHING

(7) Parker, S. C. *Methods of Teaching in High Schools.* Ginn, 1915. Pp. 529. $1.50.

A practical treatment of methods in which the author takes the point of view that efficiency and economy in instruction are facilitated by (1) adapting all instruction to contemporary social needs, (2) basing methods of instruction on sound psychological principles, and (3) applying principles of scientific business management to the conduct of teaching.

(2) Bagley, W. C. *The Educative Process.* Macmillan, 1905. Pp. 358. $1.25.

Covers the field commonly included under the term "general method," but deals with principles rather than with the details of device and method.

(2) Dewey, John. *How We Think.* Heath, 1910. Pp. 224. $1.00.

The nature of reflective thought, and means and methods of training in thinking.

(1) Bagley, W. C. *Craftsmanship in Teaching.* Macmillan, 1911. Pp. 247. $1.10.

(1) Brown, R. W. *How the French Boy Learns to Write.* Harvard University Press, 1915. Pp. 260. $1.25.

A study in the teaching of the mother-tongue.

(1) Hall-Quest, A. L. *Supervised Study.* Macmillan, 1916. Pp. 433. $1.25.

A discussion of the study lesson in the high school.

(1) Parker, S. C. *Textbook in the History of Modern Elementary Education.* Ginn, 1912. Pp. 505. $1.50.

Emphasis on school practice in relation to social conditions.

(1) Sandwick, R. L. *How to Study.* Heath, 1915. Pp. 170. $0.60.

Discusses the principles of effective study.

(1) Stevens, Romiett. *The Question as a Measure of Efficiency.* Teachers College Contributions to Education, No. 48. Teachers College, 1912. Pp. 95. $1.00.

A critical study of the efficiency of classroom instruction as measured by the number and quality of questions.

(1) Thorndike, E. L. *The Principles of Teaching.* Seiler, 1916. Pp. 293. $1.25.

A manual to guide in the application of principles based on psychology.

(1) Whipple, G. M. *How to Study Effectively.* Public School Publishing Co. Pp. 44. $0.50.

A clear discussion of the principles of effective study with practical suggestions for forming right habits.

Digitized by Google

6. MEASUREMENTS AND RESEARCHES

(2) Starch, D. *Educational Measurements.* Macmillan, 1916. Pp. 202. $1.25.

The measurement of abilities in various subjects of the elementary- and high-school curricula.

(1) Freeman, F. N. *Experimental Education.* Houghton Mifflin, 1916. Pp. 220. $1.30.

A laboratory manual for experimental education.

(1) Van Denberg, J. K. *Causes of the Elimination of Students in Public Secondary Schools of New York City.* Teachers College, Contributions to Education, No. 47. Pp. 206. $1.50.

(1) Whipple, G. M. *Manual of Mental and Physical Tests.* Warwick & York, 1915. 2 vols., pp. 534 and 336. $3.75 per set.

The purpose and methods of conducting tests with the results and conclusions of many tests.

7. SURVEYS

(2) Cleveland Survey, Russell Sage Foundation, 1916, 25 vols.

The most complete survey yet made, consisting of 16 volumes directly relating to the schools, and 9 volumes on the vocations of the city of Cleveland.

Schools:

Child Accounting in the Public Schools. L. P. Ayres. $0.25.
Educational Extension. C. A. Perry. $0.25.
Education through Recreation. G. E. John. $0.25.
Financing the Public Schools. E. Clark. $0.25.
Health Work in the Public Schools. L. P. Ayres and Mary Ayres. $0.25.
Household Arts and School Lunches. Alice C. Boughton. $0.25.
Measuring the Work of the Public Schools. C. H. Judd. $0.50.
Overcrowded Schools and the Platoon Plan. S. O. Hartwell. $0.25.
School Buildings and Equipment. L. P. Ayres and Mary Ayres. $0.25.
Schools and Classes for Exceptional Children. David Mitchell. $0.25.
School Organization and Administration. L. P. Ayres. $0.25.
The Public Library and the Public Schools. L. P. Ayres and Adele McKinnie. $0.25.
The School and the Immigrant. H. A. Miller. $0.25.
The Teaching Staff. W. A. Jessup. $0.25.
What the Schools Teach and Might Teach. Franklin Bobbitt. $0.25.
The Cleveland School Survey (summary volume). L. P. Ayres. $0.50.

Vocations:

Boys and Girls in Commercial Work. Bertha M. Stevens. $0.25.
Department Store Occupations. Iris P. O'Leary. $0.25.
Dressmaking and Millinery. Edna C. Bryner. $0.25.

Digitized by Google

Railroad and Street Transportation. R. G. Fleming. $0.25.
The Building Trades. F. L. Shaw. $0.25.
The Garment Trades. Edna C. Bryner. $0.25.
The Metal Trades. R. R. Lutz. $0.25.
The Printing Trades. F. L. Shaw. $0.25.
Wage Earning and Education (summary volume). R. R. Lutz. $0.50.

(1) *Educational Section of the Springfield, Illinois, Survey.* L. P. Ayres and Others. Russell Sage Foundation, 1914. Pp. 152. $0.25.

(1) *Portland, Oregon, Survey.* E. P. Cubberley and Others. World Book Co., 1915. Pp. 441. $1.50.
A textbook on the city-school administration based on a concrete study.

8. INDUSTRIAL EDUCATION AND VOCATIONAL GUIDANCE

(3) Davis, J. B. *Vocational and Moral Guidance.* Ginn, 1914. Pp. 303. $1.25.
Emphasizes methods of vocational and moral guidance through oral and written expression in English.

(1) Carleton, F. T. *Education and Industrial Evolution.* Macmillan, 1908. Pp. 320. $1.25.
A discussion of the educational problems connected with social and industrial betterment.

(1) Davenport, Eugene. *Education for Efficiency.* Heath, 1909. Pp. 184. $1.00.
Industrial education in the elementary and high schools with particular reference to agriculture.

(1) Kerchensteiner, Georg. *The Idea of the Industrial School.* Macmillan, 1913. Pp. 110. $0.50.
Translated from the German.

(1) Leavitt, F. M. *Examples of Industrial Education.* Ginn, 1912. Pp. 330. $1.25.
An interpretative survey of current types of industrial education.

(1) Puffer, J. A. *Vocational Guidance.* Rand McNally, 1913. Pp. 294. $1.25.
The equipment and methods of the counselor; various occupations and professions.

(1) Thompson, F. V. *Commercial Education in Public Secondary Schools.* World Book Co., 1915. Pp. 194. $1.50.
A critical and constructive treatment of current problems in commercial education in the secondary school.

9. GENERAL

(2) Lewis, William C. *Democracy's High School.* Houghton Mifflin, 1914. Riverside Educational Monographs. Pp. 130. $0.60.
A popular discussion of the school with emphasis upon the pupil rather than upon the traditional subjects of instruction.

Digitized by Google

(1) Butler, N. M. *The Meaning of Education.* Scribner, 1915. Pp. 378. $1.50.

Seven essays and addresses dealing chiefly with the function and organization of the school.

(1) Monroe, Paul (editor). *Cyclopedia of Education.* 5 vols. Macmillan, 1911. $5.00 each.

A concise discussion of all topics of importance and interest to the teacher with cross-references and bibliographies.

(1) Snedden, D. S. *Problems of Educational Readjustment.* Houghton Mifflin, 1913. Pp. 262. $1.50.

(1) Weyl, W. E. *The New Democracy.* Macmillan, 1913. Pp. 370. $2.00.

An essay on certain political and economic tendencies in the United States.

10. PERIODICALS AND PROCEEDINGS

School Review. University of Chicago Press. $1.50. Published monthly except July and August. Managing editor, R. L. Lyman.

A journal of secondary education.

Educational Review. Educational Review Publishing Co., Easton, Pa., and New York. $3.00. Published monthly except July and August. Editor, Nicholas M. Butler.

A journal dealing with the general field of education.

Educational Administration and Supervision. Warwick and York, Lancaster, Pa., and Baltimore, Md. $2.00. Published monthly except July and August. Managing Editor, C. H. Johnston.

Proceedings of the North Central Association of Colleges and Secondary Schools. Published by the Association, Henry E. Brown, Secretary, 1916.

Digitized by Google

FURTHER EXPERIMENTAL DATA ON THE VALUE OF STUDYING FOREIGN LANGUAGES

DANIEL STARCH
University of Wisconsin

In the issue of the *School Review* for December, 1915, the writer presented certain data on the effect of the study of foreign languages upon a pupil's general scholastic record, upon the size of his English vocabulary, upon his knowledge of English grammar, and upon his ability to use English correctly. The general results of those findings were that the study of foreign languages materially increases a pupil's knowledge of English grammar, that it increases to a small extent the range of his reading vocabulary, and that it modifies only slightly his knowledge of correct grammatical expression or his general scholarship.

The purpose of the additional experiments to be reported here was to determine the effect of foreign-language study in still other directions and to ascertain, if possible, how much of the difference n the performance of pupils with or without a considerable amount of language study may be due to the actual training effect of the language study and how much may be due to a difference in the original ability of the pupils.

In order to obtain concrete information on these problems, a variety of tests was carried out with 177 university students. The results of these tests are exhibited in Table I. The numbers in row 1 divide the students into groups according to the number of years of foreign-language work. On the right side of the table the same students are separated into two groups according to whether they had studied Latin or not irrespective of other language work. The second row of figures gives the number of students in each group.

The first test consisted in the writing of an extemporaneous composition in ten minutes on the topic "What Abraham Lincoln Sees" (referring to the Lincoln statue on the upper campus of the

Digitized by Google

TABLE I

1. Years of foreign language	1–2	3–4	5–6	7–8	9–15	Percentage 9–15 Group / 1–2 Group	No Latin	Latin
2. No. of persons	14	53	49	40	21	.....	59	112
3. Composition (Hillegas scale)	67.6	69.3	68.7	71.5	78.2	15.7	67.9	72.6
4. Words written	140.7	158.3	162.1	168.1	181.4	28.9	158.7	165.0
5. Different words used	82.3	86.6	96.6	96.8	111.6	35.4	89.6	95.2
6. Reading—speed	4.5	5.4	5.5	5.2	6.0	33.3	5.4	5.5
7. Reading—comprehension	60.0	65.0	70.5	65.7	68.2	13.7	64.0	69.0
8. Perception—A-test	66.2	66.8	66.2	67.8	66.1	0.0	66.2	67.1
9. Perception—form	7.5	7.7	7.8	7.5	8.0	6.7	7.8	7.9
10. Memory—words	7.4	7.2	7.3	7.2	7.2	−2.7	7.3	7.3
11. Association—free	23.5	25.9	22.6	29.9	28.7	26.4	25.3	26.3
12. Association—synonyms	15.4	15.0	15.9	15.4	14.2	− 7.7	15.0	15.4
13. Imagery—forms	7.0	7.6	7.0	7.1	7.8	11.3	7.2	7.4
14. Imagery—words	5.0	5.7	5.1	5.7	6.1	21.4	5.5	5.6
15. Years of English	5.1	4.9	5.3	5.5	5.5	.....	5.0	5.3
16. Grades—first year of high school	83.0	85.7	83.7	86.7	88.0	.....	84.5	85.7

Digitized by Google

University of Wisconsin). These compositions were evaluated by means of the Hillegas-Thorndike scale, each composition being rated by three judges. The numbers in row 3 refer to the values of the compositions in that scale. The larger the numbers are, the better is the quality of the composition. The numbers in the vertical column under percentage refer to the gain of the 9–15-year group over the 1–2-year group. To illustrate, the compositions written by the students who had studied foreign languages from one to two years had an average value of 67.6 in terms of the Hillegas-Thorndike scale. The compositions written by the students who had studied foreign languages from nine to fifteen years had an average value of 78.2, or 15.7 per cent better than those written by the 1–2-year group.

The numbers in row 4 give the average lengths of the compositions written by the different groups as indicated by the number of words written in ten minutes. It will be noticed that the average length of compositions increases materially with additional years of foreign-language study. The 9–15-year group wrote in ten minutes compositions which were 28.9 per cent longer than those of the 1–2-year group.

The next problem was to discover whether the range of variety of the writing vocabulary varied with the different groups. The figures in row 5 give the average number of different words in each composition. The 1–2-year group wrote on an average 82.3 different words in a composition whose average length was 140.7 words. There is a considerable increase from group to group. The 9–15-year group shows a gain of 35.4 per cent over the 1–2-year group. This gain, however, is not as large as it seems to be at first glance. In fact, the range of the writing vocabulary does little more than keep pace with the increase in the length of the compositions. In case of the 1–2-year group, 82.3 different words in a total of 140.7 is 57.1 different words per 100 words written; and in case of the 9–15-year group, 111.6 different words in a total of 181.4 is 61.1 different words per 100 words written.

The next test was a reading test as described elsewhere.[1] Row 6, for speed of reading, gives the number of words read per second,

[1] D. Starch, *Educational Measurements*, p. 20.

Digitized by Google

and row 7, for comprehension, gives the number of words written to express the thought-content of what had been read in the allotted time. Both aspects of reading ability show a marked increase from group to group.

There are two general factors which enter into the increased ability in composition or in reading with the increasing years of foreign-language study: (1) the training effect of the study of languages and (2) the selection of pupils. The persons in the 9–15-year group wrote better compositions and had better ability in reading than the 1–2-year group, partly because of greater linguistic training and partly because of their better original capacity. The purpose of the remaining tests was to measure, if possible, the relative shares of these two factors.

The test designated as "Perception A-test" is the well-known test bearing that name. The numbers in row 8 give the number of A's cancelled by the various groups in one minute.

The perception test in row 9 was a geometrical form test which has been used for several years in the laboratory of the University of Wisconsin. It consisted in crossing off in one minute as many geometrical forms of a certain kind as possible printed on a card among a variety of similar figures. The numbers in row 9 refer to the number of figures crossed off in the allotted time.

The test in row 10, memory for words, consisted in reading to the persons a series of ten monosyllabic nouns at the rate of one word per second. The subjects then wrote down all the words that they could recall. This test was repeated with four different series of ten words each. The numbers in row 10 give the average number of words retained.

The test designated as "Association—free" was carried out by giving a stimulus word and having the persons write as many associated words as they could in thirty seconds. Five stimulus words were used with an allowance of thirty seconds for each. The numbers in row 11 refer to the average number of associations made per person.

The test "Association—synonyms" consisted in giving a series of ten stimulus words and allowing fifteen seconds to each word for writing as many synonyms as possible. The figures in row 12 indicate the number of synonyms written in the allotted time.

Digitized by Google

The imagery test, row 13, consisted in a series of ten special tests of which the following is an example: "Consider a cube. Each face has a letter on it. *A* is on the face toward you, *B* on the face to your right, *C* on the back face, *D* on the left face, *E* on the top face, and *F* on the bottom face. Now turn the cube so that *F* is toward you and *D* is on top. What letter is on the right face and what letter is on the left face?" These tests, of course, were carried out mentally without the use of drawings or figures. The numbers in row 13 refer to the average number of tests done correctly by the different groups.

The test in row 14 was also designed as a test of imagination and consisted in presenting to the subjects seven words, one word at a time, spelled orally backward by the experimenter. The subjects then put down the word if they knew what it was. This was done mentally without first writing down the letters in reversed order. Row 14 gives the average number of the words out of seven that were recognized correctly.

The results of the experiments show that the gain in quality of composition of the 9–15-year group over the 1–2-year group is 15.7 per cent and that the difference in general ability between these two groups is 7.9 per cent if tests 8–14 may be regarded as measuring the difference in original ability. The difference between 15.7 per cent and 7.9 per cent, or 7.8 per cent, would be the residuum due to the additional language training which the 9–15-year group had had.

In order to make a crucial comparison as to how much of the greater composition ability was due to the greater original capacity of the pupils and how much was due to their greater training in language, the grades received by these students in all the subjects carried during the first year of the high school were obtained from the entrance records of the University. The amount of difference in original ability of the groups who later pursued varying amounts of language work would be definitely indicated by this method, since none had had more than one year of foreign language. The difference in the scholastic grades at the end of the first year of the high school between those who later pursued languages for a total of 9–15 years and those who pursued languages for a total of 1–2 years could certainly not be due to language training.

Digitized by Google

Row 16 gives for the different groups the average scholarship grades during the first year of the high school. It will be noted that there is a steady increase from group to group. The 9–15-year group had an average grade of 88.0, or five points higher than the 1–2-year group.

The next problem was to compare in common terms the five points of difference in scholarship on the percentile scale with the difference of 10.6 in quality of composition as measured by the Hillegas scale. To reduce these two types of measurements to commensurate units, fifty-eight compositions were rated by four persons both by the percentile method and by the Hillegas scale. In case of the percentile scale, 70 was assumed as the passing grade. Eighteen of these compositions had a value on the Hillegas scale between 66 and 70, with an average value of 68.3. Their average percentage value was 79.1. Sixteen compositions had a value on the Hillegas scale between 76 and 80, with an average value of 78. Their average percentage value was 83.7. These two groups are taken because they coincide most closely with the composition values of the 1–2-year group and the 9–15-year group respectively. We may now equate the two methods of rating compositions as follows: The difference between 68.3 and 78.0, or 9.7, Hillegas scale, is equal to the difference between 79.1 and 83.7, or 4.6, percentage scale. Hence 1.0 point on the percentage scale equals 2.1 points on the Hillegas scale and the difference of five points, percentage scale, in original scholarship between the 1–2-year group and the 9-15-year group would be 10.5 in terms of the Hillegas scale. The surprising result seems to be that the difference of 10.6, Hillegas scale, in quality of composition between these two groups is approximately equaled by 10.5, the difference in original scholarship when expressed in terms of the Hillegas scale. The conclusion seems, therefore, unavoidable that the difference in ability in English composition is due practically entirely to a difference in original ability and only to a slight or no extent to the training in foreign languages.

The increase in length of composition and in speed of reading is large and very probably in excess of the difference in original ability. Training in foreign language seems to have produced a distinct effect in greater fluency of words in writing and in more rapid perception of words in reading.

Digitized by Google

TEACHER-TRAINING DEPARTMENTS IN NORTH CENTRAL HIGH SCHOOLS

LEONARD V. KOOS
University of Washington

It is known to most of those who are in any way concerned with secondary education that a number of high schools in North Central and other states are maintaining, as a part of their educational offering, teacher-training or normal departments. To what extent teachers of these departments are required to teach other high-school work, of what the work in these departments is constituted, to what extent credit toward graduation from the high school is granted for it, what the principles are that determine its organization and content, what other high-school work is required of training-department students, and for what teaching these departments aim to prepare—these facts are not so well known. The following pages present such facts concerning the teacher-training departments in 19 high schools in 7 states of the Middle West: Kansas, 6; Minnesota, 1; Missouri, 5; Nebraska, 3; Oklahoma, 3; South Dakota, 1; Wisconsin, 1. The data used in the study were supplied by teachers who were designated by their principals as "constructively interested in the development of effective courses of study" in their line of work. The high schools from which the data have come are in communities ranging in population from two or three thousand to more than a hundred thousand.

THE WORK OF THE TRAINING-DEPARTMENT TEACHER

What the importance of the department is in the minds of those responsible for the high schools may be judged in part by the amount of work other than that of the teacher-training department taught by the instructor of this work. The facts as to this may be seen in the following tabulation showing the average number of classes per day other than teacher-training classes taught by these teachers:

Digitized by Google

Average Number of Classes Other than Training Classes	Number of Teachers
0	7
1	1
1.5	1
2	7
3	2
4	1
Average, 1.4	Total, 19

The fact that 7 of the total number of training-department instructors devote their time exclusively to the department, that 16 teach 2 classes or less and that in but 3 schools are they required to teach 3 or more periods per day outside the department, indicates that the department is made their primary concern, i.e., it is important in the minds of those responsible for the high schools.

The subjects other than training-department courses taught by these teachers were ascertained and are as follows: history is mentioned 6 times; English, mathematics, and science are each named twice; domestic science is mentioned once. Two teachers speak of additional administrative duties.

THE TRAINING-DEPARTMENT OFFERING

Years of appearance of the teacher-training work.—The work of the departments appears in the third and fourth high-school years in 17 schools and exclusively in the fourth year in 2 schools. In the former the work does not constitute all of the work of the student in either year. In the latter it requires the student's full time.

The usual teaching subjects.—The educational offering in these departments is exceedingly diverse. The subjects as reported have, for the purposes of this study, been distributed in three groups which we may term (*a*) the usual teaching subjects, (*b*) the pedagogical subjects, and (*c*) the special subjects. Subjects in the first group are required in all but one of the 19 departments. The representation of these subjects may be seen in the following tabulation which lists each subject under the name by which it was reported and the number of times it appears in the data supplied:

Digitized by Google

Subject	Number of Times Reported	Subject	Number of Times Reported
Reviews	11	American history and civics	1
Arithmetic	6	Language and grammar	1
Civics	6	Geography	1
Physiology	6	Reading, literature, composition, spelling, and penmanship	1
Common branches	3		
English (professional)	2		
American history	2		

The total amount of time devoted to these subjects ranges from a third of a year to a year, but, for most schools offering them, reviews extend through a year, and arithmetic, civics, and physiology extend through a half-year.

The pedagogical subjects.—One or more pedagogical subjects are required by all the 19 schools. The representation of these subjects may be seen in the following tabulation. Subjects are designated by the names given them by the teachers reporting. As in the case of the usual teaching subjects, the amount of time devoted to these subjects ranges from one-third to a full school year, but psychology and methods and management are more commonly half-year subjects, methods and methods and observation extend through a full year, while the practice in pedagogy is almost evenly divided between half-year and full-year courses.

Subject	Number of Times Reported	Subject	Number of Times Reported
Psychology	10	Professional work	1
Pedagogy	7	Psychology and school management	1
Methods and management	6	Pedagogy, psychology, country-school management, and country life	1
Methods	5		
Methods and observation	3		
History of education	2		
School management	1		

Special subjects.—The offering in the special subjects is notably infrequent. Agriculture, when organized and conducted especially for the students in these departments, is reported for 8 schools, in 5 cases as a half-year, in 2 as a full-year course, and in the remaining departments as part of a one-third year course in agriculture and nature-study. But it is also required, as may be seen below, when

Digitized by Google

not so organized and conducted, in 8 additional schools. It is thus seen to be a constituent of the work in almost all teacher-training departments, which, in the light of the fact to be pointed out later, that these departments are largely occupied with the preparation of rural-school teachers, is surely to be commended. Other courses in special subjects appearing once each and organized and conducted especially for this department are manual training and domestic science, drawing, drawing and music, and bookkeeping. Additional instances of the requirement of special subjects, where these are not maintained especially for the students in these departments, will be found listed below under "Other High-School Work Required of the Training-Department Students."

THE PRINCIPLES DETERMINING THE ORGANIZATION AND CONTENT OF THE COURSES IN THE USUAL TEACHING SUBJECTS

The teachers in these departments were asked to state the principle that determines the organization and content of the courses in such usual teaching subjects, the common branches, as are constituents of the work of the department. Is the work largely review, does it aim to develop scholarship in these subjects, or does it aim to give the student a knowledge of teaching methods and principles of organization of courses? No one of these principles operates to the exclusion of the others in any department. The first and second principles dominate in a single school, the first and third in 11 schools, and all three are kept in mind in 4 schools. One of the teachers in the last group responded as follows: "The primary aim is to develop a knowledge of teaching methods and principles of organization of courses, but considerable attention must be given to review of subject-matter, as well as to extension of it." The total numbers of times that each of the principles is recognized are, respectively, 16, 8, and 18. Manifestly, most of the teachers are assuming that scholarship in the teaching subjects has been sufficiently provided for and that the task to be accomplished is the development of the professional aspects of these subjects, which may, however, usually imply some measure of review.

Digitized by Google

CREDIT GRANTED TOWARD GRADUATION FOR THE TRAINING-DEPARTMENT WORK

No school of this group denies credit toward graduation for any of the work so far touched upon in this study. The total amounts, in units,[1] of this work accepted toward graduation are as follows:

Number of Units Granted	Number of Schools
2	2
3	10
3½	1
4	3
4½	1
5	1
6	1
Total number of schools	19

It may be understood from this that work in the teacher-training department, for purposes of high-school graduation, is placed on a par with the traditional high-school subjects.

OBSERVATION AND PRACTICE TEACHING

Observation of teaching is required in all the 19 departments, but the amounts vary so widely as to make it impossible to point to a standard practice, and are stated in such a way as not to make them readily comparable. It has already been noted above that 3 departments include the work in observation with that in methods as a single course. Five schools report—and this is in accord with state requirement[2]—30 lessons during the school year, 7 report the equivalent of one 20- to 40-minute period per week throughout the school year, and a single school each reports "one day in each month," "two days," "depends on class," and "a very little." In 11 of the 19 schools no credit is granted for the observation required. In the remaining schools the credit is allowed

[1] The unit was defined as follows for the teachers supplying the information for this study: "A Unit is here understood to be the equivalent of a subject running through a full school year with five single class periods per week for which the student is required to make preparation outside the class period. When no such preparation is required, the class period is usually doubled, as in laboratory or shop courses, or the credit cut to half the amount that would be granted were such outside preparation necessary."

[2] Missouri.

Digitized by Google

for it as part of courses in methods, methods and management, methods and observation, observation and practice teaching, etc.

Practice teaching is a requirement in but 5 of the 19 departments. The teacher in one of these departments reports that "some time is provided," the remaining 4 reporting as shown by Table I. Thus, in 14 of the 19 schools no organized practice

TABLE I

Number of Weeks	Number of Periods per Week	Length of Period in Minutes
18	5	80
20	5	15, 20, and 30
20	5	40
36	5	60

teaching is provided, although 3 speak of permitting the students in the department to substitute when the regular grade teachers are off duty. Although "learning by doing" is long since a platitudinous educational principle, many of us are still failing to recognize it in educational practice, preferring to direct our students in reading and talking about an activity to requiring participation in it.

OTHER HIGH-SCHOOL WORK REQUIRED OF TRAINING-DEPARTMENT STUDENTS

Fifteen of the 19 schools in which the teacher-training departments supplying data for this study are maintained prescribe to a greater or less extent what the student's work outside the department is to be. The 4 remaining schools state that the student's work outside the department is not prescribed for him, i.e., we may conclude that the remaining work necessary for graduation is elective. The prescriptions of the former group are set forth in Table II. The more commonly prescribed subjects are seen to be English, mathematics, history, science, and agriculture. The modal amounts of requirement in these subjects are, respectively, 3, 2, 1, 1, and 1 units. American history is named as a requirement in 9 of the 15 instances in which history is prescribed. If to this number are added the 3 departments that report it as a required course especially organized and conducted for the teacher-training

Digitized by Google

TABLE II

Prescribed Work Outside the Training Department

English		Mathematics		Science		History		Civics	
Number of Units	Number of Schools	Number of Units	Number of Schools	Number of Units	Number of Schools	Number of Units	Number of Schools	Number of Units	Number of Schools
2½	1	1	1	1	9	½	1	½	2
3	8	2	7	1½	1	1	6	?	1
4	1	2½	1	2	2	2	3		
?*	1	?	1	?	2	?	5	Total...	3
Total...	11	Total...	10	Total...	14	Total...	15		

Foreign Language		"Special or Vocational" Subject		Agriculture		Bookkeeping		Penmanship	
Number of Units	Number of Schools	Number of Units	Number of Schools	Number of Units	Number of Schools	Number of Units	Number of Schools	Number of Units	Number of Schools
3	1	1	2	½	1	?	2	½	1
				1	5				
				?	2				
				Total...	8				

*The question mark indicates that the amount of credit was not stated.

Digitized by Google

department, as noted above, we find it an all but universal requirement. In 4 of the 14 instances of a prescription in science, physics is named. It is interesting to note that foreign language is prescribed in but one school.

The total amounts of prescribed work outside the department for those schools that supplied data in such a form as to make them usable for such a compilation, are as follows:

Number of Units	Number of Schools
0	4
3	1
5	1
6	1
7½	3
8	1
13	1
Total	12

These amounts vary widely but, with the exception only of the school prescribing 13 units, give the student, as may be seen by comparison with what has been reported above under the head of "Credit Granted toward Graduation for the Training-Department Work," the privilege of election of a part of his work. Taking the training-department work does not deprive the student of all freedom of election in his remaining high-school work.

KINDS OF SCHOOLS FOR WHICH TRAINING DEPARTMENTS AIM TO PREPARE TEACHERS

Eleven of the 19 departments aim to prepare teachers for rural schools exclusively. Seven others prepare for both rural and graded schools, although 4 of this number make it clear by some qualifying statement that preparation for the latter is not the primary function of the department: "for rural schools primarily," "for graded schools in exceptional cases only," "but largely for country schools," "best fifth-year students elected to local elementary schools." One of the 19 departments prepares only for "any grade in the grammar schools" of the city in which it is maintained. It can seldom be anything but an unsatisfactory professional situation that will permit graduates of the high-school teacher-training departments, without subsequent training elsewhere, to teach in the elementary schools of a city school system. Preparation for rural-school teaching is more nearly justifiable on account of the present dearth of teachers with any amount of professional training in these schools.

Digitized by Google

THE EDUCATIONAL QUALIFICATIONS AND TENURE OF THE TEACHING POPULATION. I

J. HOWARD STOUTEMYER
Kearney State Normal School, Kearney, Nebraska

Since a number of states require no academic standard other than the "ability to pass an examination before a local county superintendent or other supervising officer," and keep no record other than the grade of certificate held, adequate measurement or even an estimate, of the academic and professional preparation, tenure, and experience of the teaching population of the country as a whole is impossible.

A. THE EDUCATIONAL QUALIFICATIONS OF THE TEACHING POPULATION

The following data from government reports indicate that our teaching population is woefully lacking in preparedness. In 1905 the Commissioner's report stated that the number of normal graduates did not nearly meet the demand due to the expansion of the school system, resignation, or death, hence thousands of places had to be filled with untrained or half-trained teachers. In 1911 the Commissioner reported that less than half of the teachers in this country had adequate preparation. "In some states less than 20 per cent of the teachers have had full preparation given by the normal schools, and in most states less than 10 per cent of the teachers in the country schools have had such preparation." The report for 1912 stated that the greatest evil in our school system was the lack of trained teachers. "In no other country that pretends to provide an opportunity for universal education is the condition in this respect so bad as in the United States." In 1914 the 40,000 teachers with some measure of professional preparation did not nearly meet the demand, hence Monahan and Wright concluded "that for not more than one in five positions is a trained graduate available" (1).[1]

[1] Numbers refer to bibliography to appear in the May issue of the Journal. Charts were drawn by Messrs. Baker, Cadwallader, Hartman, and Samples of the manual-training department.

Digitized by Google

Excerpts from various educational surveys repeat the refrain of the educational unpreparedness of our teachers. The recent survey of Vermont revealed this fact: "Aside, then, from the teachers trained in schools elsewhere, or, since 1911, in the graduate course in Vermont, and a few high-school graduates who have enjoyed a year in the new training classes, Vermont has, in the proper sense of the term, no professionally trained elementary-school teachers." (2) In the recent survey of Ohio it was found in the sections studied that only 50 per cent of the rural teachers were high-school graduates, and 18 per cent had an elementary education only. In the elementary schools 50 per cent of the teachers were high-school graduates, and not less than 16 per cent had completed the elementary school only. In the high schools 60 per cent of the teachers were not college graduates, and 19 per cent had not completed high school. In 1914 Alabama reported that only 73 per cent of her teachers claimed to have any training above the seventh grade. The percentage with training above the high school, other than summer school, is as follows: not more than one year above high school, 21 per cent; not more than two years, 36 per cent; not more than three years, 45 per cent; more than three years, 5 per cent. One does not wonder that in his report for 1915 the state superintendent put his conclusion in large letters, "Teacher Training in Alabama Is a Crying Need."

A survey of Wisconsin rural schools showed that they have been made "a dumping-ground for untrained and unsuccessful teachers." The supply of inexperienced but "legally qualified girls keeps down the salaries and standards of efficiency." Many young people have taken up this work, not because they were especially fitted for it, but because it was the only thing they could do with their limited amount of preparation (3). The superintendent of public instruction of Oklahoma states that "the inexperienced and untrained teachers gravitate to the rural schools where they secure experience and training at the expense of these schools." "An ideal system of education would not permit an inexperienced, untrained teacher to experiment with boys and girls except where that work is supervised by experts."

For the purpose of studying the educational qualifications of rural teachers, Foght selected 55 representative counties in the

Digitized by Google

United States and sent questionnaires to 6,000 rural teachers. From the 2,941 replies received, he found that 4 per cent have had less than the elementary-school course; 45 per cent had completed a four-year high-school course; and 67.7 per cent had professional training, interpreting training to cover all kinds of professional instruction such as summer schools and short courses. "From the foregoing it is evident that the greatest weakness of the rural teachers now in service is their professional unpreparedness. One-third of all of them have no professional basis on which to build, or specific knowledge of the science or art of teaching" (4, p. 28). Without the equivalent of a high-school course "the teacher cannot have the necessary store of information to draw from as occasion may demand; he is in danger of getting into ruts; and his educational vision becomes hopelessly narrowed and indistinct" (4, p. 24). Where certification is based on no academic standard other than ability to pass an examination, "many half-taught young people, with little or no professional attainments, having but slight comprehension of the needs of country life, hold places in the schools and keep down standards of efficiency" (4, p. 22).

Since many states were unable, from either official reports or personal letters, to furnish statistics on the educational qualifications of their teachers, the following selection in the tables is made from among those reports with the best-arranged and most usable statistics. Group I of Table I represents the conditions in the state as a whole. It may be noted that in each state represented, the proportion of college or normal-school graduates is very small; and the additional number who have had either part college or part normal training is not great enough to indicate adequate standards of preparation. Completion of a full high-school course is relatively low, and the percentage with part high-school or with elementary education only is far too high. In Illinois one in six has had less than a high-school course; in Iowa one in three; in Kansas one in five. Stated a little differently, Illinois has 56 per cent who have had more than a high-school course; Iowa, 34.4 per cent; Kansas, 39 per cent. Several of these states have a predominantly large proportion with less than a full high-school course: West Virginia has 43.6 per cent; Texas (for the state as a whole), 54 per cent;

Digitized by Google

Tennessee, 63 per cent. The proportion of teachers with more than a high-school course in West Virginia is 43.4 per cent, in Tennessee 16 per cent, and in Texas, 23 per cent. The percentage of college or normal graduates ranges from 12 for Tennessee to 25 for Illinois.

TABLE I

ACADEMIC AND PROFESSIONAL TRAINING

(Figures are percentages)

State	Common School Only	Part High School	Full High School	Part Normal	Full Normal	Part College	Full College
Group I:							
Illinois* (1915)	7.5	8.5	28	19	17	7.7	8
Iowa (1915)	5.4	26.3	33.9	.....	.....	23	11.4
Kansas (1915)	.....	21	40	.....	8	.....	12
Tennessee† (1914)	.....	63	21	.....	7	.....	5
West Virginia‡ (1914)	.....	43.6	12.6	.....	13	.....	3
Group II:							
Missouri (1915)							
Town	11	16	72	28	54§	.....	.....
Country	32	47	21	46	10‖	.....	.....
Texas (1912)							
Town	.....	25	31.5	.....	25.5	.....	18
Country	.....	70.8	16.5	.....	8.6	.....	3.2
Group III:							
Maryland (1915)							
Elementary (not including Baltimore)	12.7	20.7	33.7	22.7¶	4.8	3.2	2.1
High school	0.7	5.1	13.1	20.4¶	2.5	20.7	37.4

* Three per cent (both college and normal).

† Four per cent unknown.

‡ 27.2 per cent unknown.

§ Eighteen per cent, with less than 8 weeks' normal work.

‖ Forty-four per cent, with less than 8 weeks' normal work.

¶ Part normal and non-standard normal combined.

Group II of Table I shows the difference between rural and urban communities. In Missouri 27 per cent of the town teachers and 79 per cent of the country teachers have less than a high-school preparation; in Texas 25 per cent of the town teachers and 70.8 per cent of the country teachers have less than a high-school preparation. In the rural schools of Texas only one in eight graduated from a normal school or college, and only three in ten completed a high school or better. In the independent districts two out of every five have completed a normal-school or college course, and three out of every four have finished high school or

Digitized by Google

better. Twice as many town teachers have completed the high-school course as have rural teachers; three times as many town teachers completed the normal-school course and six times as many town teachers graduated from college. In the rural schools of Texas 91.04 per cent of the teachers held temporary certificates, and 8.96 per cent held permanent certificates. In the urban schools 58.14 per cent held temporary certificates, and 41.08 per cent held permanent certificates. A similar situation is found in Oklahoma, where 25 per cent of the rural teachers hold first-grade certificates,

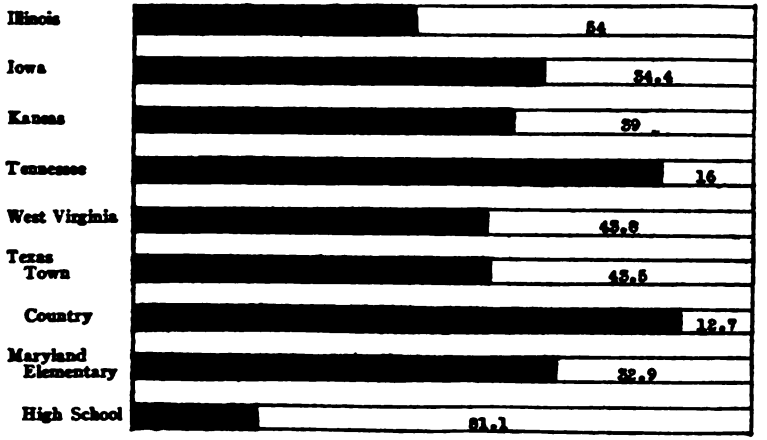


CHART I.—Academic and professional training. Black bars indicate high-school training or less; light bars, more than high-school training. Figures show percentages.

while 74 per cent of the city teachers hold first-grade certificates. In Chart I, the black bars represent the percentage of teachers with high-school preparation or less. The numbers are the percentages of those with more than high-school training. The average of the nine cases is 60 per cent with high-school preparation or less and 40 per cent with more than high-school preparation, only a part of which can be called professional training.

In Missouri, it may be noted that three and one-half times as many town teachers had graduated from the high school as had country teachers, and four and one-half times as many town teachers had completed the normal-school course. Under part

Digitized by Google

normal, Table I, Group II, for Missouri is classed work of eight, sixteen, or thirty-two weeks. One and one-half times as many rural teachers had part normal, and 44 per cent of the rural teachers had less than eight weeks' normal training against the 18 per cent of town teachers. In the 1914 report the study of the preparation of 1,079 teachers in 61 teacher-training towns in Missouri showed that one-half of the teachers in the elementary grades are graduates of the local high school; more than 90 per cent have had some professional training in addition to their high-school work; 70 per cent have attended a normal school, one-half of these teachers for a period of one year or more. The study of 515 rural teachers in these same counties indicated that "three-fourths of these teachers are rural in every sense—educated in the country with country-school methods and now teaching in the country, using the same methods very largely. . . . . Seven per cent have no training above the eighth grade. This should be very appreciably increased to represent the actual number who have no high-school work. A teacher whose only training outside of the elementary grades consists of a few weeks of review of the common branches in a local school, preparatory to examination, has really no high-school work. Fifty-five per cent attended a state normal school, almost half of these for a period of one year or more" (5, pp. 323–24).

In the Maryland survey, as shown in Group III, Table I, there is the division of the teachers (white) into elementary (not including Baltimore) and high-school teachers. Of the 3,000 white elementary teachers, one in eight had only an elementary education, one in five had a year or two in high school, and one in three had completed high school, while less than one in twenty had received a standard normal training. "Of the rest, some have received an irregular normal training; a few have been to college, and still fewer through college. Grouping together standard normal, part college, and college graduates, about 10 per cent of the elementary teachers of Maryland—not more—may be called well trained; not quite one-third could on a stretch be called fairly well trained; at least one-third are practically untrained" (6, p. 60). In the case of the high-school teachers (white) it is stated that "not exceeding two-fifths of the regular high-school teachers of the state may be

Digitized by Google

described as adequately prepared; a second two-fifths are from one to four years short, though they have had some kind of training—a partial college or normal-school course, for example; the remaining fifth are woefully lacking in proper preparation, being made up of those who have had only a high-school education, a part normal course, or some similarly inadequate and ill-adjusted preparation" (6, pp. 63–64).

Table II is a combination of six separate tables taken from the Wisconsin report of 1915. The system of standardization of

TABLE II

TRAINING OF TEACHERS IN WISCONSIN

	Counties—Exclusive of City Superintendents				Under City Superintendents	
	Rural Schools	State Graded Schools	Grades Below High School	High School in Country	City Schools	Free High School
Number of teachers	6,635	1,479	1,197	962	5,123	1,821
	Per-centage	Per-centage	Per-centage	Per-centage	Per-centage	Per-centage
1. Full college course	0.3	1.6	2	47.2	17.1	55.8
2. Part college course	1.2	3.4	3.1	7.2	1.7	.....
3. Full normal course	1.9	28.3	44.8	41.3	54	31.9
4. Full elementary-normal course	1.5	4.3	5.8	0.8	3.2	89.7
5. Full rural course at normal	2.9	0.6	0.1	.....	.....	.....
6. Part normal course	16.5	19.4	15.6	3	4.4	.....
7. Full county-training course	20.9	14	5.8	.....	1	.....
8. Part county-training course	4.3	2.5	0.6	.....	0.4	.....
9. Full teacher's training in high school	2.2	1.5	0.7	.....	0.8	.....
10. Full high-school course	40.5	21.9	19.9	0.4	9.7	.....
11. Part high-school course	8.2	2	1.1	.....	0.5	.....
12. Common school only	1.6	0.4	0.5	.....	.....	.....
13. Technical school	.....	.....	.....	.....	4.8	8.4
14. Not included in the foregoing	.....	.....	.....	.....	2.5	2.9

schools divides them into rural schools, which usually consist of one room; when such schools become more than one-room schools with certain requirements as to equipment and grade of teaching, they are classed as state graded schools, which may have all twelve grades, but are still under the supervision of the county superintendent. It may be noted from Chart II that in the rural school 51.7 per cent of the teachers have had some professional training; in the state graded schools 75 per cent, in the grades below high

Digitized by Google

school 78.5 per cent, and in the city schools 82.6 per cent have had more or less professional training. The high schools under the county superintendent and the free high schools under city superintendents have each approximately 90 per cent who are either normal or college graduates.

From the report of the high schools of Idaho, it is found that in the large and medium four-year high schools approximately 90 per cent of the teachers are either normal or college graduates. In the small four-year high schools 80 per cent, in the three-year high schools 75 per cent, and in the two-year high schools or less, 50 per cent or less are college or normal graduates. Shideler's study of

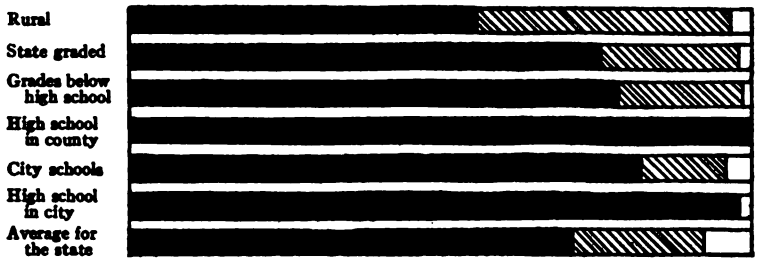


CHART II.—Training of teachers in Wisconsin. Black is number with more or less professional training; stripes, with full high school.

accredited high schools in Indiana shows that the proportion of teachers without an academic degree decreases, and those with university degrees increases, directly with the size of the city. Cities of 2,500 or under require less than one-half the training required by the larger cities (7). Deffenbaugh's study of the smaller cities shows that 69 per cent of the school boards require high-school teachers to be college graduates; 55 per cent will employ these graduates without experience; 36 per cent require their elementary-school teachers to be normal graduates; "and where a normal diploma is not required, only 48 per cent require a high-school diploma"; 14 per cent will employ high-school graduates without experience (8, pp. 82–83).

A decade ago Cubberley stated that "so large is the number who teach but a short time, so easy is it to enter upon the work of

Digitized by Google

teaching, in most states without the necessity of any training of a professional nature, that the number of trained teachers actually teaching in different states is not large. Perhaps, averaging all the different states of the Union, 15 to 20 per cent of all the teachers in our schools have secured special training before entering the work of a teacher. The remaining 80 to 85 per cent have been prepared by private study, and tested wholly by examination and experience, and have had no special professional preparation whatever for the work of teaching" (9, p. 8). These conditions have not changed very greatly for the country as a whole since Coffman shows that "three-fifths of the men and two-fifths of the women in rural schools have less than a high-school education, only one out of a hundred has a college education. One-half of the men and one-third of the women in town, one-fifth of the men and one-sixth of the women in the city have less than a high-school education" (10, p. 255).

The data given in the preceding paragraphs indicate that the average educational qualification of the teaching population is low, very much lower than our best standards of preparation, and that the degree of inadequacy of the preparation varies directly with the density of the population of the unit of administration—the worst conditions are found in the rural communities, and the best in the larger cities.

B. TENURE OF THE TEACHING POPULATION

The data on the tenure of the teaching population are likewise extremely meager, though a few states have carefully tabulated their statistics. Many of the untrained, unsuccessful teachers drop out; some of the most successful teachers push on to better places; other changes occur on account of death, resignation, or expansion of the school system, so that the teaching population is in a constant flux. The annual migration of teachers is so great that it presents one of the gravest of educational problems.

Table III and Chart III present the data on tenure in the same district. With the exception of the town teachers in Missouri and the free high schools in Wisconsin the length of tenure in the same position is much less than two years. In the country schools of

Digitized by Google

Missouri 84 per cent served in the same district two years or less; in the rural schools of Wisconsin 88 per cent served two years or less; and in the one-room schools of Louisiana 92 per cent served two years or less. In Missouri's study of town teachers it was found that "the average tenure is nearly five years. Forty per cent of all have a tenure of five or more years." In the study of the rural teachers, it was found that "the average tenure is one and eight-tenths years, a little less than a third of the tenure of grade

TABLE III

LENGTH OF SERVICE IN THE SAME DISTRICT

State	One Year	Two Years	Three Years	Four Years	Five or More Years	Percentage Two Years or Less
Illinois (1913)	36	16	8	5	33	52
Louisiana (1913–14)	46	16	10	4	23	62
Louisiana (1914–15)						
One-room schools	74	18	6	1	3	92
Total teachers (New Orleans excluded)	55	20	10	4	11	75
Wisconsin (1914)						
Rural	64	24	2	3	8	88
State graded	49	25	12	5	9	74
Grades below high school	37	24	13	8	18	61
High school	50	23	12	5	10	73
City teachers	23.2	15.3	11.2	7.3	43.1	38.5
Free high schools	44	24	12	6	14	68
Missouri (1915)						
Town	27	15	10	7	41	42
Country	64	20	7	5	4	84

teachers" (5, pp. 323–24). In Chart III the black bars give the percentage of teachers with two years of service or less in the same district; the remainder of the bar gives the percentage with more than two years of service. The average of the twelve cases is 62.5 per cent with the tenure of two years or less.

The survey of 1,153 teachers of one-room schools in 31 counties of Washington in 1914 showed that 280 teachers were in the same district as the preceding year, 304 were in the same county but in different districts, 341 were not teaching, and the remainder had moved from the county. This indicates that only 25 per cent were in the same district and only 50 per cent were teaching even in the same county. Foght summarizes the results of his study of the

Digitized by Google

tenure of rural teachers as follows: the total number of months taught was 45.4; the number of months in the present position was 12.2; the average number of different schools taught was 3.4 with 13.8 months in each school, or less than two years of 140 days each, or less than one calendar year (4). The Better Iowa Schools Commission (1912) found that the length of time teachers remain in the profession was but 3.8 years and that 72 per cent of the rural schools had a new teacher each year and that a third of these schools had three different teachers each year. In Texas some

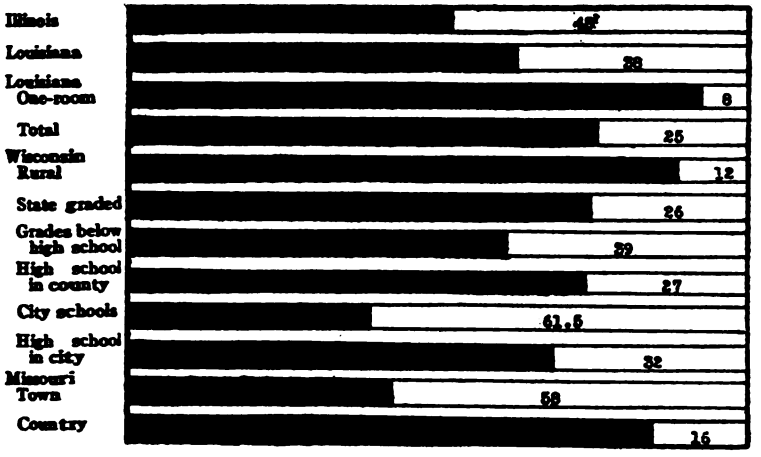


CHART III.—Length of service in the same district. Black bars indicate percentage with two years' experience or less; light bars indicate more than two years' experience. Figures show percentages.

85 per cent of the rural teachers are new to their positions each year. It is not improbable that 75 per cent of the rural teachers and 50 per cent of the town teachers shift positions each year. In this shift of the teaching population Coffman finds that of the 1,178 men studied,

48.1 per cent are at the present time teaching in the country, but 83 per cent of them began there; 35.7 per cent are teaching in towns and villages, but only 13 per cent of them started there; 16.2 per cent are in the cities, but only 4 per cent of them commenced there. Of the 68 per cent of the 4,037 women who started in the country, but 41.6 per cent have remained there; 18 per cent began in towns and villages, but 32.6 per cent are teaching upon

Digitized by Google

this level now; and although only 14 per cent of them began their careers in cities, 25.8 per cent are teaching in cities. Apparently the raw recruit gets his or her initial experience in the rural or semi-urban schools [11, p. 22].

In this shift there are certain time and training correlations which Coffman describes thus:

Fifty per cent of the men and 70 per cent of the women who go from the country to town, shift within the first five years. Fifty per cent of the men who go from the country to town and from town to city, spend less than three years in the country schools, and less than four years in town. Fifty-seven per cent of the ambitious women teach less than two years in the country, 85 per cent less than four years in the country; 39 per cent teach less than two years, and 67 per cent less than four years in town. The shift is directly related to the amount of training. This averages four years in the country above the elementary school, five years from country to the town to city; six years from country to city directly; and seven years directly from town to city [10, p. 237].

The teacher should not be prevented from enjoying the free right of contract in the selection of fields of labor; but when changes are made, greater efficiency should accrue to both teacher and school. Much of the present shifting is wasteful beyond computation, and the gain thereof is far less than has generally been supposed. Reed states that "the financial loss to the districts through lack of continuation in organization and management, and the educational wastes from the frequent changes are appalling. The financial gain and the professional advancement of the people making the changes, on the whole, have been slight." "No other business could survive under the same conditions. The only reason why this form persists is because the mistakes and losses are not so evident and so the responsibility is not located" (12, p. 5). The superintendent of Louisiana reports:

In the matter of tenure in the same position the situation is very bad, indeed. The teachers wander from parish to parish and from school to school, few remaining in the same position longer than one or two years. Teachers seem to fail to see that every year's service in a school adds to their opportunities for good work, and patrons and school officials apparently take the view that continuous service on a job adds nothing to the ability of the employee to do the work well. Excluding the teachers of New Orleans, where positions are permanent, 2,563, or 56 per cent of the teaching corps, were in their positions for the first year. Excluding beginners, the figures mean that 1,800 white teachers "swapped" positions. There are not more than a hundred

Digitized by Google

teachers in the state, excluding New Orleans, who have been teaching in the same positions ten years or longer. It is due the teachers and especially the children, that we organize to retain worthy, competent teachers permanently in the same positions. My judgment is that the state will find it necessary to take the initiative in this matter by subsidizing the salaries of those teachers who cure themselves of the wanderlust, and remain permanently in their positions [13, p. 15, 1913–14].

To secure the longer tenure, the Wisconsin legislature in 1915 passed an enactment which provides that any rural-school teacher who is retained in the same school after the first year shall receive from the state funds $2 per month in addition to the salary paid by the district; if retained after the second year, $4 per month; if retained after the third year, $8 per month for that and each succeeding year. The successful rural-school teachers who are graduates of a rural-school course of a normal training equivalent to two years above the high school are entitled to state aid of $10 per month for the first year, and to $15 per month for each succeeding year in which the school is successfully taught.

The inexperienced teacher takes any position with the intention of getting experience in order to move on to a bigger place the next year, and so on the year following. The effect of this procedure is disastrous to the rural and village communities which annually afford this practice and experience to function in some larger and richer community. This apprentice year would not be so expensive to the smaller community if, after having profited by the experience thus gained, the teacher remained long enough in the community to render real service in solving local educational problems. The financial loss to the community in the cost of reorganization and the wastes consequent upon this apprenticeship system is sufficient to warrant a public campaign to secure the permanent location in the service of the locality.

Limited as is the tenure in the elementary and rural schools, it is no worse than is the tenure of high-school teachers. In the high schools of Nebraska 44 per cent of the teachers were new to their positions last year, and 75 per cent have taught in the same place four years or less (12). In the accredited high schools of both Indiana and Illinois 50 per cent of the teachers had a tenure of two years or less. In the largest cities of Indiana "almost one-fifth of

Digitized by Google

the positions were filled last year, while the number amounted to almost three-fifths in the smaller towns" (14). The tenure of teachers in the high schools of the North Central Association is as follows: "In Wisconsin out of 800 teachers, 46 per cent were new to their positions last year; in Colorado, 44 per cent; in Iowa, 37 per cent; in Indiana, 40 per cent" (14, p. 521). Shideler's study of the accredited high schools of Indiana showed that, in cities of 5,000 or under, more than one-half of the teachers have served only one year in their present positions. In seeking the causes of this shifting, he found high correlation between salaries and density of population. Coffman and Jessup found that "there is a direct correlation between the salary paid and the size of the place, and that the variability and range are greater in the larger places than in smaller places" (15, p. 114). Since the larger communities give larger financial return and greater social opportunities, many teachers find their reward in moving to such places, for too frequently communities will not adequately reward high merit.

Not only is the tenure of the teachers in any one position extremely limited, but the appalling fact is that their supervisor and administrative heads have a tenure just as limited. In Nebraska nearly one-half of the high-school principals are new to their positions each year, and 85 per cent have served three years or less in their present positions (12). Shideler found that 45 per cent of the principals of the accredited high schools of Indiana were new to their positions—one-third in the larger cities and two-thirds in the smaller towns. In commenting upon the short tenure of the principal, a government report states that some schools have as many as two to four principals in a single year, and the different types of administration have shown that the succession of unfinished experiments has proved disastrous to both pupil and school.

The case of the superintendent shows a slight improvement, but when one considers the greater responsibility of the office, the shortness of the tenure presents one of the most perplexing problems of school administration. In the 190 village schools of Nebraska only one superintendent has served more than ten years; two-thirds of the superintendents have served two years or less, and one-third are new to their positions this year. In the second- and

Digitized by Google

higher-class cities 50 per cent of the superintendents are serving their first or second years. The high average of four years for these superintendents is explained by the fact that the total number is small, and a few have served terms long enough greatly to raise the general average (12). The median years of tenure for superintendents of the 250 accredited schools of Iowa was less than two years, and in the 758 non-accredited schools 40 per cent were new to their positions and 70 per cent had been in their positions two years or less. Data published in 1912 by the government concerning 1,200 superintendents employed in cities of 4,000 and over showed that one-fourth had served two years or less, and only one-half had served four years or more (14). Deffenbaugh found in his study of the school systems of small cities that the tenure of the superintendents is very unstable; of 1,202 superintendents, 567 had been in their positions less than five years, 380 from five to ten years, and only 255 more than ten years; while one-fourth had served two years or less in the same position (8). The median number of years of tenure for 186 superintendents in Indiana cities in 1912 was 2.16 years. The median number of years of tenure in Indiana cities taken at ten-year intervals was: for 1864, 1.8 years; for 1874, 2.5 years; for 1884, 2.3 years; for 1894, 2.4 years; for 1904, 2.9 years (14). When as many as one-third to one-half of the heads of our city schools change annually, the situation is serious enough to demand nation-wide concern and consideration.

The data obtainable on the tenure of county superintendents are even more limited, though information at hand shows a tenure no more extended than among city superintendents. The terms of office for the county superintendent as given in 1909 are as follows: in 23 states and 2 territories the term was two years; in 3 states, three years; in 13 states, four years. In two states constitutional provisions prohibit more than two terms, and in many others custom demands the same rotation of office. The prevalence of the short term or of limiting the number of short terms destroys unity and continuity of school procedure and prevents the formulation and execution of long-time educational policies. Only 23 states require the county superintendent to hold as much as a first-grade

Digitized by Google

certificate; the remainder prescribe no qualifications. So long as the superintendency is a political office, with regular rotation and no professional outlook for higher advancement, unless it be some political office, short tenure and inefficient superintendents will be the result. Removal from political dictation, tenure during efficiency, and liberation of the office from petty limitations will go a long way toward increasing the length of tenure service and the quality of the county superintendent.

The boards of education in cities frequently have short tenures, for in certain states constitutional, legal, or customary provisions limit the length of the term of appointment or election and the number of terms that may be served. The usual organization of the board of education has been either the annual or the biennial election of the entire membership. Such a condition prevents the development of any continued constructive policy, for when the term of office is short, school business must be considered in terms of present expediency. In many cities there has been an incessant struggle to secure changes in the membership of the board in order that new movements may be started or certain funds may be used. If the community intends to secure an efficient school system, it must make its school officers as permanent as the well-organized industrial enterprise with its stable policy and centralized control.

The office of the state superintendent is likewise subject to a short term, or few terms of service. The data (1909) show that a few states elect the superintendent annually; the term of office in 19 states is two years; in 3 states, three years; in 19 states, four years. Since 1853, the tenure of office for state superintendents in Illinois averages nearly four years, though the term was extended to four years in 1870, and of the last two incumbents the former served two terms and the latter is serving his third term. The short term does not necessarily mean short continuance in office, as Pennsylvania and Massachusetts have had short terms and long continuation. There is a marked tendency for a longer term and a longer tenure for the superintendent or commissioner.

The state boards of education have been, in some cases, little more than a formal organization, with most of the members *ex officio*, usually the chief officers of state. At the present time there

Digitized by Google

is a tendency for reorganization, eliminating the political *ex officio* type and enlarging the scope of the duties of the board and the length of tenure of the individual members. A few states still have short tenures of two, three, or four years, but the term is being lengthened, for it is recognized that the most effective boards have long terms and few contemporary changes.

After the consideration of the short tenure of the teachers, the principals, the superintendents, the county superintendent and state superintendents, and boards of education both local and state, one cannot help wondering that our educational system works as well as it does. Our entire educational corps is a fluctuating, migrating, nomadic body with neither permanency of tenure nor continuity of policy. The reorganization of our present system with better-qualified teachers, supervisors, and public overseers, and a relatively permanent administration and long efficient service on the part of each member of our educational system seems to be the crying need in this country.

[*To be continued*]

Digitized by Google

METHODS AND CONTENT OF COURSES IN HISTORY IN THE HIGH SCHOOLS OF THE UNITED STATES
(*Concluded*)

HUGO H. GOLD
State University of Iowa

NOTEBOOKS

The Commission on Accredited Schools and Colleges of the North Central Association recommends that history should be taught as a disciplinary, as well as an educational, subject. One of the methods used by teachers in making history a disciplinary subject is the requirement of notebooks. Some teachers report constant drill in the usual forms of note-taking with special reference to college work.

Only 78 teachers say they *require* the use of a permanent notebook in *all* courses, 34 say that it is a matter of choice and not compulsion, while 14 say that a notebook is required in all except first-year classes, and 9 say that it is required only in first-year classes.

a) *Advantages of keeping notebooks.*—Table II is an estimate of the advantages of keeping a notebook as given by 111 teachers of history.

TABLE II

Advantages	Frequency
Fixes subject in mind (crystallized information)	23
Unification and classification of material (organizing ability)	22
Especially valuable for review	21
Develops good habits of study: order, promptness, neatness, accuracy, etc.	21
Helps in getting the important points (essentials)	13
Serves as a reference and guide (textbook supplement)	13
Develops power of evaluating material	11
Aids the memory	9
Correlates events and facts	8
Encourages more intensive and careful reading	7
Gives teacher a check on student's work	7
Stimulates interest	6
Pupils take interest in *handwork* (motor expression)	5
Furnishes definite requirement for preparation	4
Aids logical and original thinking	4
Helps to visualize the subject	3
Is a time-saver	1
None given	24

Digitized by Google

It should be noted that there is great disagreement as to the merits of note-taking. The greatest difficulty in the final solution of the problem hinges upon having the notebook *properly kept.* If students cheat or copy or prepare the notebooks for the teacher's benefit and not for their own, this sort of work is worse than useless.

b) Disadvantages of keeping notebooks.—Table III consists of the opinions of 74 high-school teachers on the evils or disadvantages of keeping notebooks.

TABLE III

Disadvantages	Frequency
Wastes time which might be better spent	41
Pupils often degenerate into mere copyists (cheating)	26
Pupils too dependent upon notebooks (hinders or weakens memory)	16
Takes too much of teacher's time and energy	14
Pupils get the mechanics of notebook making rather than the substance of history	11
Deadens interest in history if too detailed	6
Liable to become mere drudgery	5
Results have been unsatisfactory	4
When finished it contains very little or nothing of permanent value	4
An irksome bore to many students if not used rightly	2
Notebook prepared for teacher's benefit rather than pupil's	2
Tabulated facts are not necessarily ideas (mental sloth)	2
Inability to find notebook and method of keeping it that approaches our ideal	2
Positive detriment if not carefully examined and graded by teacher	1
"Loses spirit in the letter of the work"	1
Written reports and individual consultation better	1
May lead to unnecessary repetition	1
None given	61

From Table III it appears that there is a prevalent feeling that the notebook is worked overtime. It is a safe assertion that close scrutiny, careful instruction, and supervision are necessary to get the best results from notebooks. By careful instruction we do not mean that the notebooks should be prepared according to some minute directions. It is better to allow the students to use as much originality as possible, working out notebooks to suit their individual needs.

c) Grading of notebooks.—Eighty-nine teachers say that the notebook, when used, is examined and graded, 10 say that it is not, and 4 say that it is examined but not graded. Ten fail to state whether it is examined and graded, and the remaining 26 never use the notebook.

Digitized by Google

d) What is entered in the notebook.—Outlines of one kind or another were most frequently mentioned. These are usually outlines of the textbook or of collateral reading. This was rather a surprising discovery. The Commission on Accredited Schools and Colleges recommends that notebooks or cards be kept by the pupil, showing a record of the work done, this record to consist of (1) sketch maps made by the pupils as illustrations of their studies, (2) references to important material, (3) extracts from primary and secondary authorities, and (4) informal notes on reading done in connection with the course.

In the majority of schools the spirit of these recommendations is being observed in a limited way, but the fact that more teachers (44) mention "outlines" than any other one thing seems to indicate that notebook work is made too tedious. In addition to outlines the following are some of the other things entered in the notebooks in the order of frequency in practice. Notes on collateral reading (40), maps (37), important points emphasized in class (22), reports made in class on special topics (20), notes on classroom lectures (11), notes from reports made in class by other pupils (10), tabulation, statistics, charts, diagrams, graphs (9), summaries of special topics or periods (7), cartoons, pictures, art drawings (7), notes dictated by teacher (6), original themes, essays, or sketches (6), newspaper clippings referring to history (5), significant dates (5), reference notes for collateral reading (bibliography) (4), questions for review (4), etc.

e) Additional notebook suggestions.—If notebooks are required, careful supervision would render the work more profitable.

Notebooks prepared with mechanical precision according to minute directions are of questionable value. Let the notebook, as far as possible, be an expression of the individuality of the pupil. The pupil should feel that the notebook is solely for his own benefit.

One means of reducing the amount of copying or cheating is to require that the notes be handed in as soon as finished, a premium being placed upon promptness.

Newspaper clippings, cartoons, diagrams, etc., entered in the notebooks may cause pupils to take pride in their work.

In the state of New York a maximum credit of 10 per cent in the Regents' examination is given for history notebooks. In some

Digitized by Google

schools in that state the notebooks count for 50 per cent of the day's recitation once a week.

It would seem better to emphasize a few important things to be placed in the notebooks and not require a complete outline of the textbook. "A topical notebook condensed" so that the notes will be serviceable to the pupils in reviewing and in assimilating the main facts approaches the ideal.

SOURCE MATERIALS

In reply to the question, "Do you use source materials?" 113 teachers answered in the affirmative, 9 failed to answer the question, and 13 answered negatively, ranging from an unqualified "No" to answers like "No, not to any extent by pupils."

a) Extent and manner of using sources.—The North Central Association recommends that one-fourth of the collateral reading consist of source material. Teachers are either not aware of this recommendation or are not observing it. While sources are being used in many schools, more especially in American history, 45 per cent of the teachers make very little or no use of source material. Thirty-two teachers use it only for illustrative purposes in the classroom, either reading or lecturing to the class to explain the method of using sources. In 10 instances sources are used practically not at all on account of lack of material.

b) Character of sources used.—Source books constitute by far the greatest amount of source material used in high schools. Copies of original documents, reprints, and translations are frequently used. Some use is made of old letters, diaries, periodicals, pictures, and curios. In two cases the testimony of old settlers was mentioned.

Among the source books mentioned in the order of frequency were Hart's *Contemporaries*, Hart's *Source Book*, Robinson's *Readings on European History*, Cheyney's *Readings on English History*, Davis' *Readings on Greek and Roman History*, McDonald's *Selected Charters and Documents*, Munro's *Source Book on Roman History*, Henderson's *Source Book*, and Kendall's *Source Book*.

c) Purpose of using source material.—Table IV shows the aim or purpose in the use of sources, being an evaluation by 135 teachers.

It will be noted that motivation, first-hand information, the visualization of history, and "local color" or "setting" are the aims most frequently given.

Digitized by Google

The historical and educational associations throughout the country recognize the value of sources. Textbook writers emphasize their use by giving many references to source materials and

TABLE IV

Purpose	Frequency
To make history real and vital	22
To stimulate interest (motivation)	20
First-hand and additional information	18
To get the spirit of the times (local color)	18
Comparison of authorities and independent judgment	15
To illustrate method of writing history	14
To correct mistaken ideas	10
Acquaint students with the different kinds of historical materials	8
Illumination of the textbook	7
To make impressions stronger	7
Training in historical criticism and interpretation	5
To broaden pupil's viewpoint	5
Encourage habit of investigation	5
To cultivate the historical sense or attitude	4
To visualize events	3
To get the connected and complete story	2
To give atmosphere	2
To give slight training in research work	2
As a basis for written work	1

special topics. Some teachers are of the opinion that high-school pupils are too immature to use the sources, while others are handicapped by lack of material and time.

OTHER AIDS AND DEVICES

a) *Maps and map drawing.*—In answer to the question, "Is map drawing required in all history courses?" 102 teachers answered with an unqualified "Yes." Three failed to answer the question, 2 do not require map drawing at all, and the remaining 28 require maps in some courses but not in others. The custom seems to be to require from ten to twenty-five maps per year, usually outline maps completed by the pupils, but in many cases freehand or sketch maps drawn from memory or without a copy.

The data entered in maps was tabulated under four divisions, the numbers in parentheses indicating the frequency with which a given item was mentioned: (1) territorial changes after wars or treaties (25); (2) battle fields, military routes, and campaigns (20);

Digitized by Google

(3) important places, such as cities, rivers, mountains, states, countries, and their colonies, and location of important historical events (19); (4) commercial or trade routes, vocations, dates (8). In the opinion of the writer the importance of these is in the reverse order. According to reports of teachers of history, the purposes of map drawing are to develop a definite sense of location and proportion, and of geographical relations of history, and to make the work more definite and concrete by the visualization of history. Geographical "background" is necessary to a proper understanding of history.

b) Special devices for locating and correlating events in time.—There is a tendency to learn only the important dates, then relate other events to these. Table V gives the frequency with which special devices were reported by 135 high-school teachers.

TABLE V

Devices	Frequency
Key dates learned, deductions drawn to approximate others	21
Chronological charts or tables	18
Charts (made by pupils mostly)	14
Outlines (made by pupils mostly)	10
Parallel chronological tables showing history in different countries going on at the same time	11
Parallel history in different countries. Cross references and correlations	10
Drills, repetitions, reviews	10
Large associations of persons and events	9
Diagrams	6
Reasoning by cause and effect	6
Association of things, dates, places, and actions	4
Associating dates by peculiarity of words or figures	3
Constant reference to other history courses, e.g., American history is studied with European background	1
Discussion or quiz	1
Connect everything with the present as far as possible	1
"Twenty-five most important dates in history"	1
Parallel lines to show relation of Greek and Roman history	1
List of presidents or kings with three most important events of each administration or reign thoroughly memorized	1
No special devices (nothing new to report)	16
No answer	42

Table V is self-explanatory. Only 12 teachers give a definite estimate of the number of dates memorized in each course, these varying from six to about fifteen or twenty important ones each year.

Digitized by Google

c) Devices for teaching civics.—The prevailing devices in the teaching of civics to secure concreteness and motivation are visits to local institutions (courts, state legislature, city council and jail, voting places, etc.), dramatization (mock trials and congresses, town meetings, elections, city councils, etc.), and the study of illustrative materials (charters, constitutions, government bulletins, congressional records, addresses, etc.). Other devices were special talks to class by officials, debates, class organized for accomplishment of some civic work, prize essays and original themes on national questions.

d) Correlation of history with other subjects.—Of the teachers who reported, 100 make definite attempts to correlate history with other subjects. Twelve failed to answer the question, while the remaining 23 make very little or no effort at correlation. There is a definite attempt to correlate history with English and literature, but there is little uniformity in practice with reference to other subjects. A very common practice is for the English teacher to give credit for themes which the pupils have written in history courses, or for the English department to use historical topics for themes. One teacher mentions giving history reports and papers to English teacher for criticism. Another says that the assignments of reading in history and English are made to dovetail wherever possible.

American history and American literature are often studied at the same time thus furnishing an opportunity for cross references and correlation. Another method is to show the relationship of poems and novels to history, to refer to the development of literature during a particular historical epoch, or to study the writers of a given period. In many instances mention was made of using mythology, especially in the study of Greek history. Gayley's *Classical Myths* is a favorite source for this.

In studying Roman history first-year students take an interest in the relationship of Latin, which they are just beginning, to history. In one case it was stated that Latin pupils talk to the history class on Roman life, Caesar's war engines, etc. Geography is correlated largely through map drawing by the pupils, through wall maps, and through the discussion of the influence of geographical

Digitized by Google

features, climatic conditions, resources, etc., upon people, countries, manners, and customs.

SUMMARY AND CONCLUSIONS TO PART II

III. *As to materials and methods.*—

1. Not one-half of the high schools have reached the standard minimum requirements of the North Central Association with respect to the number of volumes of supplementary works on history.

2. At any given time approximately one-half of all high-school pupils are taking work in history courses. There is great variability in methods of teaching history, the most common methods being "topical" and "chronological."

3. The prevailing tendency is to recognize the textbook merely as a guide or outline to be supplemented by collateral reading and other materials. The textbook is considered as a standard of minimum requirements, and the pupil is held directly responsible for a mastery of its contents.

4. The North Central Association has a definite standard of minimum requirements of collateral reading in the various courses in history. In the United States as a whole 30 per cent of those making a definite estimate require less than this minimum.

5. In regard to intensive and extensive reading there is great variability in practice. The consensus of opinion seems to be in favor of greater emphasis of intensive reading for high-school pupils.

6. The most common methods of testing collateral reading are general class reports, oral and written examinations, notebooks, and occasional themes.

7. Practice furnishes no index as to the relative worth of primary and secondary works for collateral reading. About one-half of the teachers report that historical fiction and poetry are used in a limited manner, usually recommended, but not required. Biography is used quite extensively in American history. Magazines and newspapers are used for collateral reading to a considerable extent in advanced history classes.

8. Most teachers consider collateral reading a very important part of effective history teaching. Many are handicapped by lack of time and improper library facilities.

Digitized by Google

9. A prevalent method for self-expression by the pupil is the requirement of oral and written reports, the consensus of opinion being that the best results are derived from the former.

10. Teachers are at variance as to the relative advantages and disadvantages of keeping notebooks. Most teachers, however, require notebooks in all courses in history. If the standard of the North Central Association is correct, too many outlines are required to be placed in notebooks.

11. The North Central Association advises that one-fourth of the collateral reading be source material. In the United States as a whole 45 per cent of the high schools make little or no use of the sources. In the schools which use the sources there is great lack of uniformity as to the extent and manner of using them.

IV. *As to special aids and devices.*—

1. Pictures and postcards, the stereopticon and stereoscope, moving pictures, myths and stories, travel reports, industrial exhibits, old relics, old settlers' testimony, etc., constitute some of the supplements in history teaching, some of these being quite frequently mentioned.

2. Maps and map drawing were mentioned by 102 teachers as special aids in history work.

3. Chronological charts, outlines and diagrams, drills, reviews, and cross references are used extensively in locating and correlating events in time.

4. The prevailing practice among teachers seems to be to require the memorizing of only a few of the more important or epoch-making dates and to relate other events to these.

5. To secure concreteness and motivation in the teaching of civics the prevailing devices are the emphasis of community civics and current events, visits to local institutions, dramatization, and the study of illustrative materials.

6. Many teachers make special efforts to correlate history with English, literature, language, geography, and other subjects. With the exception of English and literature there are practically no attempts, as departments, at correlation.

Digitized by Google

EDUCATIONAL NEWS AND EDITORIAL COMMENT

The Scientific Study of Education

The forward movement in all branches of science during the past century may be summed up, first, as an advance toward greater objectivity; and second, as an advance toward a functional interpretation of data thus objectively studied. In natural sciences and in social sciences alike, purely subjective, a priori discussions are in disrepute, and scientists are no longer satisfied with mere classification of information. All must be interpreted in terms of results. Science desires to know, not primarily what is an institution which we are studying, but what is this institution good for, what service can it render, how does it function?

That this dual spirit of progressive scientific study is today firmly grasped by educational leaders was clearly evident in the Kansas City meeting of the Department of Principals and Superintendents. In both general and sectional meetings at Kansas City the old style "inspirational" address, so commonly found in conventions of teachers, was conspicuous by its absence. Of course a few such discussions were heard—they are as easy to make as they are useless—but the ear of the convention was given to men who were talking, not of theories, not of vague suggestions of future possibilities, but of education in terms of experiments actually under way, of evaluations made on the basis of concrete data, upon scientific surveys, and the like.

The *School Review* is glad to announce that in the near future we shall publish two of the Kansas City discussions which are entirely representative of the scientific attitude in studying educational problems, namely, "Experiments in Supervised Study," by Principal I. M. Allen, of Springfield, Illinois; and "A Plan of Quantitative and Qualitative Credit," by W. A. Bailey, of Kansas City, Kansas.

Professional Training of High-School Teachers

College students who plan to teach in high schools need to be informed that very many states prescribe a minimum of strictly professional courses. For example, Colorado requires that one-sixth of a teacher's undergraduate training shall have been professional. Iowa requires twenty semester hours, Kansas fourteen, Michigan eleven, Minnesota

Digitized by Google

twenty, Missouri fifteen, Ohio thirty, Wisconsin thirteen, and other states in proportion. In other words, in order to qualify as a high-school teacher under state laws, a candidate needs to have had three or more courses designed to give strictly professional training.

A committee of the College Teachers of Education estimates that about thirteen thousand new high-school teachers are needed each year within the territory served by the North Central Association. Unfortunately less than half of these candidates are provided with the minimum professional requirements. This fact is extremely embarrassing both to unequipped college graduates and to administrative officers. Frequently the result is personal disappointment, which can be avoided only by makeshift adjustments, or by open violation of state laws.

Two causes may be assigned for the disadvantages just named. First, college students are often uninformed as to the professional requirements, or, if they are informed, they postpone almost all the professional courses until very late in the college course, frequently too late to secure the requisite credits. The second cause is closely related to the first. College and university departments of English, history, mathematics, and the rest, are either ignorant of the state laws, or they are willing to embarrass the students by keeping them misinformed. No one can doubt that it is the duty of departments of education to insist upon wide publicity within college circles of the legal requirements. If these laws are on the statute books, students who desire to teach ought to be informed definitely before it is too late.

Subject-Matter Courses and Professional Courses

The relation between the number of subject-matter courses and of professional courses for high-school teachers seems to be settled in many states. Four or five professional units out of a total of thirty-six usually required for graduation does not seem to be an unreasonable proportion. The North Central Association of Colleges and Universities has gone on record as favoring a minimum of eleven semester hours, approximately four courses, of a professional nature. However, this minimum falls considerably below the average required by legal regulations of the eight states listed above.

If a prospective teacher needs four professional courses in his curriculum leading to a Bachelor's degree, what shall be the nature of these courses and when shall they be taken? Upon the first question a very interesting consensus of opinion was presented in Kansas City by a committee of the College Teachers of Education. One hundred school-

Digitized by Google

men, high-school principals, school superintendents, and college teachers of education, were asked to name in the order of desirability professional courses best suited for the rank and file of teachers. The result placed Educational Psychology first, Technique of Teaching second, Methods in Special Subjects third. The next three subjects in order of preference were Principles of Education, Theory of Teaching, and Principles of Secondary Education. Now it is quite obvious that the content of the last three named is practically equivalent to the content of Technique of Teaching. We are therefore not far from the average judgment if we say that there is recommended a course in the Technique of Teaching, or General Methods of Teaching, a course in Educational Psychology, and a Special Methods Course in English, history, mathematics, etc. As a fourth subject should be added, whenever possible, a course in Practice Teaching.

To the query when, and in what order, these professional courses should be elected, the answer appears relatively easy. Consensus of opinion cited above seems to be that a thorough grounding in the subject-matter of the subject to be taught is the first indispensable element in a teacher's equipment. Severe criticism, undoubtedly justified, is laid upon normal schools, in that they often load their curriculum with method courses upon a very limited number of subject-matter courses. The truth seems to be that professional courses ought to be given in the Senior year of college life. The logical order of courses appears to be General Methods, possibly in the second semester of the Junior year, Educational Psychology in the first semester of the Senior year, and if possible both a Special Methods course and Practice Teaching in the last semester. This arrangement places professional training in an easy and natural sequence, at the close of a student's college life, after his subject-matter courses have furnished him a suitable background. Moreover, the sequence named is best calculated to minimize the objections of many college departments which have not yet waked up either to the educational ends served by professional courses in education, or to the legal requirements of a growing number of states.

The Experimental School
will it teach "unblushing materialism"?

The *New York Times* is afraid that the experimental school to be established in New York under the auspices of the General Education Board will be devoted to "bread and butter education and nothing else," that the young people there trained will be "as destitute of culture as a

Digitized by Google

Hottentot," that the "modern scholar, if these theories prevail, will be a man profoundly versed in automobiles, steamship construction, bridge-building, microscopic analysis . . . . ," and that "unblushing materialism" will find "its crowning triumph in the theory of the modern school."

These fears are utterly groundless. They are so completely foreign to the thought both of the founders of the school and of its director, Dr. Caldwell, that one must suspect that an animus of carping, jealous, and vindictive opposition lies back of their expression. At any rate, the *Times* seems to have taken its clew from just such a source. Unfortunately the public at large is not in a position to realize how thoroughly must be discredited all criticisms emanating from such prejudiced witnesses.

Exactly what does the school propose to do? It proposes to make, purely in an experimental way, certain radical innovations in the curriculum. For example, these educational leaders feel that the intensive study in the secondary schools of Latin and Greek as languages does not function well. They therefore drop these studies. But the cultural aspects of the inimitable classical stories are to be given to all the pupils in the form of English translations. Instead of the spectacle of a small number of youths struggling for years over the intricacies of dead languages and never really assimilating the culture of these bygone people, we shall see that culture extended through the mother-tongue to many young people. Again, formal English grammar is to be dropped. This is indeed a startling innovation in a city which still burdens its schools with this subject, devoting in the elementary school over 40 per cent of the English time to formal grammar. By discarding the out-worn doctrine of formal discipline imparted through English grammar, the modern school does not intend that language habits shall be disregarded. The mother-tongue is to be learned "in the pupil's stride," and every teacher and every class is to be a guide for language habits. Moreover, French and German, history and civics, literature, art, music, and drama are to form an essential part of the curriculum. There is, then, no ground whatever for the fear that the education in this school will be lacking in "soul" and "vision."

There is, to be sure, one further innovation proposed upon which educational standpatters may look with suspicion. Doctor Caldwell is a scientist. He was selected partly because of this primary interest in science. The modern school will very frankly endeavor to give very much larger emphasis to scientific training as an extremely vital and

Digitized by Google

essential part of the curriculum than is possible as yet in the public schools. However, only a blind stupidity could charge such men as President Eliot, Mr. Flexler, and Dr. Caldwell with fostering a plan to make science soulless and lacking in vision. Indeed, these are the very men, supported by untold numbers of other men of vision, who believe that a rich culture, functioning directly in the minds and hearts of men, can be opened up by an intimate study of nature and her wonders. The blindness which could identify visions like these with the dead materialism of running automobiles and steamship construction can be characterized with no more expressive term than asinine.

R. L. L.

Military Drill in Central High School, Omaha

Principal J. G. Masters, describing the system of military drill which has existed in Central High School, Omaha, for twenty years, writes:

The drill is held on Mondays and Thursdays immediately after school; about forty-five minutes are used in maneuvering and fifteen minutes in assembly and dismissal. In addition, the boys occasionally appear in dress parade at some celebration given by the city. In June one week is taken from school time for intensive drill on the part of cadets who are "to go to camp." This camp is usually about twenty-five miles from home, and is given over to all forms of military discipline. The Board of Education pays our Commandant $50.00 per month, while one member of the faculty gives approximately one-third of his time to the work. Boys furnish their own uniforms and pay their own expenses at camp. The federal government furnishes carbines and ammunition for target practice.

The military work is in charge of a Major from the National Guards and cared for on the part of the school by one of our vice-principals. Three credits out of thirty-two are allowed for the four years in military drill. The student is given no credit for the first year of this work. The work in general consists of all forms of military movements in marching ranks. The officers and some of the men spend considerable study in military science. With officers this is done at the close of each drill for about fifty minutes or an hour. We now have in the military drill a total of 613 boys out of 800. The work is very popular among the boys and I think it can be said with fairness that the best boys and leaders in the high school are in the military work.

Concerning the value of the work, Mr. Masters is outspoken with one preliminary reservation.

It seems to me that it is perfectly clear that any discipline which devotes only two hours a week to the actual exercise in this training is of necessity too brief to be satisfactory. Acknowledging this shortcoming, I think everything

Digitized by Google

else must be said in favor of military drill. All of us who are constantly surveying the work observe that it does put into every boy power of decision, backbone, and something of the habit of obedience. While the work is of some value to all, it is unusually valuable for the officers. If you were to ask me whether we favor its continuance and whether it does enough good to pay for the constant care taken to keep it going effectively, I should answer emphatically, "yes."

Mr. Masters' testimony upon the relative merits of military drill and other forms of physical training is in line with the general belief. He does not think that it is superior. He says:

> Indeed, I am inclined to think that well-organized trips, in groups, across country, in which boys could spend sixty minutes each afternoon along the country roads, through forests, over mountains and streams, would be very much more desirable. Over purely gymnasium work, military training has the advantage of being out of doors.

A Supply Shop for a City School System

Among the several unique features of the Kansas City (Kansas) school system one of the most interesting and suggestive is what is called the "supply shop." In the center of the city is located a large building which looks like a machine shop or a manufacturing plant. In it are centered the activities of the superintendent of buildings and grounds and his corps of nearly one hundred janitors. Once a month in this central bureau the entire force of janitors gathers to discuss plans for greater efficiency. In the supply shop also are departments in which are stored necessary school supplies like printed blanks, medical supplies for the "first aid" departments in each school, and similar equipment. By automobile delivery trucks the needs of any school are promptly met.

In another part of the shop one finds a municipal workroom in which is gathered for renovation all school furniture which has become unfit for use. Expert workmen make over as good as new the most hopeless-looking chairs and desks. In an adjoining room is an extensive window-shade plant prepared to take care of all wants; in another expert carpenters are at work making teachers' desks and cabinets. In other parts of the building are the headquarters of the school plumber, the school steam fitter, the school cement man. A force of twenty expert mechanics is kept employed the year around, and one hundred are employed during the summer. No contracts are let to private concerns, except the erection of the buildings themselves. All heating plants,

Digitized by Google

ventilation systems, furnishings, and fittings are cared for by the municipality itself.

The superintendent of buildings, W. H. Griscom, estimates an annual saving to the city of between $30,000 and $40,000 and in addition a premium upon prompt and efficient service in all matters pertaining to the physical equipment of the various school plants. Opposition of local merchants, contractors, and labor leaders has gradually diminished. It is surprising that the eight years of successful experiment made in Kansas City in this line has found no imitators.

A Plea for Sympathy

Under the title, "Comments, Cold and Kind," a college Senior writes the following:

Much have I suffered from themes that came back with no comment. Throughout two quarters of one English course I handed in weekly papers which were projections of my own soul. Some remote, oracular reader doled me out regular grades, giving no sign that my individuality ever touched her. I felt baffled, irritated.

When I studied with Dr. M., bless his heart, not a word I wrote did he overlook, though I was one in a class of seventy. Cordial, kindly little notes, in his precise hand, enlivened the margins of my papers. There was some comfort in writing for him.

Just before Christmas a history paper was returned to me. I loved that essay, and had hoped fervently that my instructor would like it. He did. My stories reminded him of others; my climaxes and eloquences were punctuated by his marginal amens. He forgot to put on a grade, but he caught the spirit and I rejoiced. That was a Christmas present worth while.

This statement of a college Senior has its message for all composition teachers. Even more than college students, high-school pupils are sensitive to the attitude of the one who reads their themes; they are easily repelled by lack of sympathy. English study, it cannot be said too often, is not alone nor primarily drill in the mechanics of grammar, spelling, and punctuation. Quite the contrary, composition is learning to express thought. To be spoken effectively, thought must be spontaneous. Unless the pupils feel that they are speaking to one who understands and enjoys them, their thought is inhibited at its very source by the fear of an indifferent critic. "There was some comfort in writing for him," says the Senior. Do your children get some comfort in writing for you?

Digitized by Google

Comments on themes are the sure indication of a teacher's attitude. Penciled remarks are among the most effective instruments of instruction because they are insistently remembered. The morale of a class is lowered when children expectantly receiving their returned themes are baffled by the absence of comments, meaning no interest; or are irritated by red-ink straining-at-gnats corrections, meaning no sympathy. The teacher must show interest in what pupils have to say; this will best encourage them to say something more. There must be appreciation of the personality of the writers of original expressions, of individual points of view, even at the expense of passing over, for the time, errors in externalities. If the children feel comfortable and happy in their writing, they will accept adverse criticism without resentment; the sting is taken out of comments which are not compliments.

Theme reading such as this is not an easy task; but in order to secure the happy results minor considerations may well be eliminated. Reduce the number of themes; cut down their length; give more time and energy for teaching that has great reward. There is no virtue in the bulk of papers you correct, no sanctity in the amount of time you spend. As soon as themes become drudgery to you they become worse than drudgery to the pupils—they become punishment. Enlist the instincts of self-revelation and communication as allies in English work. Make theme comments personal and sympathetic. The response will be an effort to say something worth while, and that after all is the primary business of the composition class. The mechanics of good form will come only through a desire to dress worthy ideas in suitable garments.

"Literature à la Carte"

A communication

Not being concerned with the teaching of English, I was skipping over "Literature *à la Carte*" in your February issue—in my eagerness to read the excellent article on algebra—when my eye lighted on some remarkable statements in said article that made me go back and read it from end to end. And I'm mighty glad I did so, as it has given me much pleasure—of a malicious and altogether unholy nature.

From what I can gather the author of "Literature *à la Carte*" holds: first, that tastes in literary dishes vary with the individual and that this variation is particularly marked in children; secondly, that because of this variation children should not all be made to read the same story or book, but should be given plenty of wide choice in the selection of

Digitized by Google

literature; thirdly (here I am not sure that I get the author's meaning), there are mighty few books worth reading through, it being sufficient to choose certain chapters. (I tried chap. ii of *Hugh Wynne* and found it the stupidest chapter of an otherwise excellent novel. But as I say, I have perhaps missed the significance of the thought the author strives to convey.)

Space will not permit of pausing to comment on the sprightly and unusual manner in which Professor Opdycke introduces his subject. Such gems as: "The *pompus* parade of provender moves apace" must be passed over. Though we wince at the sting conveyed in "The conceit of adulthood is nowhere more apparent . . . . than in its formulation of studies for the young"; though we may protest at classifying algebra, history, grammar, and "*table d'hôte* reading" as "ptomaines," yet we will suffer in silence. Later on we read that "'Casey at the Bat' may be an excellent beginning for a group of readings that deal with the subject of rivalry or contest, a subject always near to the heart of youth."

Mr. Editor, isn't that a rather poor beginning? If Casey had knocked the ball over left-field fence, thereby winning the game, youth would have rejoiced. But Casey struck out. Why, the charm of that poem lies in the humor, the burlesque of mighty Casey "fanning" when so much depended on his hitting. Youth doesn't care for eleventh-hour failures; youth wants the game saved, not lost.

Later on we read: "They [children] no longer wallow in the slime of the penny dreadfuls. 'Nick Carter' is dead and done with—Glory be!" If Professor Opdycke means to imply that there was "slime" in the Nick Carter stories of fifteen years ago, can he prove it? As a boy I was warned away from those "dime novels"; and, boylike, I determined to try them. Alas, Nick Carter was so tame, so improbable, so wishy-washy, after such stories as *Treasure Island* and *Sherlock Holmes*, that I put him aside forever. Slime? Why there's more slime in some of our magazines and best sellers than Nick Carter ever dreamed of—may he rest in peace!

But the cream of Professor Opdycke's article—the dessert in this *à la carte* feast—is in the long list of poems and stories "that have been worked out with such excellent results."

Perhaps only a carping critic would suggest the inappropriateness of classifying Tennyson's "Break, Break, Break" as a sea poem. The sea is certainly mentioned, so let it pass. Olive Thorn Miller's middle name was perhaps made *Thome* by a typographical error. And doubtless to

Digitized by Google

the *à la carte* it is immaterial whether Booth Tarkington or Paul Leicester Ford wrote *The Great K and A Train Robbery*, so long as it is a bully good story, surpassing Nick Carter at his best. Nor is *Freckles* made any poorer by attributing the authorship to Lynn Roby Meekins instead of Gene Stratton-Porter, although people are doubtless wondering why it is considered a "Train" story. But, Mr. Editor, when among the "Cat Stories" we find Kipling's *Maltese Cat*, and when we vividly recall that the "Cat" was a flea-bitten polo pony, we feel that certainly here Professor Opdycke has put the *carte* before the horse.

All of which recalls the anecdote of the lady (she must have belonged to the *à la carte*) who went to the public library for something to read.

"Have you Laura Jean Libby's latest?" she asked.

"I'm afraid not," said the librarian. "But maybe I can find something else for you. Here's a good story—*The Kentucky Cardinal*."

"Thank you," said the lady, "but I don't care for any religious book today."

"But," protested the librarian, "this cardinal was a bird."

"That fact," answered the lady with freezing dignity, "would certainly not recommend the book to me, I assure you."

It seems to me the trouble with Professor Opdycke's *à la carte* menu is that when you order a literary dish you never know what you're going to get. Imagine ordering "Maltese Cat" and getting horse flesh! But I would not have the impression prevail that I am out of sympathy with any movement whose ultimate aim is to cherish and foster a love for good literature. Indeed as far as my very limited knowledge goes most people have already agreed that it is unreasonable to expect children to love literature when they are forced to read, and even to study intensively, books that to them are dreary and dull. Yet I seriously doubt whether many teachers of English, after reading "Literature *à la Carte*," will be ready to go as far in the other direction as the author would have them go.

In conclusion I wish to say that all of the foregoing opinions are but a layman's point of view. I am sure Professor Opdycke has forgotten more literature than I ever knew. So I feel sure he will generously and charitably view this wordy epistle with that forbearance usually exhibited toward those who are plainly in their—(table) dotage.

J. T. ROBINSON

RICHMOND, VA.

Digitized by Google

BOOK REVIEWS

CURRENT LITERATURE ON CIVICS AND OTHER SOCIAL STUDIES IN JUNIOR AND SENIOR HIGH SCHOOLS

R. M. TRYON
University of Chicago

Space will not permit an exhaustive treatment of the numerous books, articles, and pamphlets which have come from the press during the past twelve months or so, purporting to contain material for the betterment of both the subject-matter and the teaching of civics, and some other of the social studies in one or more of the last six grades of the public schools. Under these circumstances it becomes necessary either to make selections from the whole mass or to take types, and either to give all that has appeared under each or to select the most helpful from a number. In this discussion it seems most worth while to exhaust certain types and select the best from others. The types included herein are: committee reports, books and articles on the teaching of civics, and material adapted to local conditions.

REPORT OF COMMITTEES

The year 1916 will go down as an important one in the history of the teaching of the social studies in the junior and senior high schools, because three important committees made reports during this year. In a book of 284 pages appeared the report of a committee of the American Political Science Association on the methods of studying and teaching government, pursued in American schools, colleges, and universities.[1] In a pamphlet of 63 pages on *The Social Studies in Secondary Education*[2] a committee of the National Education Association made known its views on these important studies; and in a similar form was published *Five Hundred Practical Questions* by a special committee of the New England History Teachers' Association.[3]

In 1908 there was printed in the *Proceedings of the American Political Science Association* the report of the Committee of Five of this organization. This report centered about the following phases of civic instruction in secondary schools: number of students enrolled and the time given to the subject, the nature of the course and plan of instruction, the teacher, the textbook, and the

[1] Haines and others, *The Teaching of Government*. Macmillan, 1916.

[2] A. W. Dunn (secretary), *The Social Studies in Secondary Education*, Bulletin, 1916, No. 28. Government Printing Office, Washington, D.C.

[3] *Five Hundred Practical Questions in Economics for Use in the Secondary Schools*. D. C. Heath & Co., 1916.

Digitized by Google

school library. After a brief period of three years another committee was appointed by this same association to supplement and add to the scope of the report. It is the report of this latter committee that is under review. Besides a very suggestive section on "Recent Progress in the Teaching of Government," there are parts devoted to a report on the teaching of civics in secondary schools, the course of study, report on the teaching of political science in colleges and universities, and an appendix containing the report of state committees on the teaching of civics in elementary and secondary schools, the first one and the last two being of little practical importance. This, however, is not saying that they lack historical value. Indeed, a few years hence we shall be glad to have this material in the form in which it appears in the report for purposes of comparison.

The section on the course of study contains suggestions as to the subject-matter and methods of approach to the study of government in both the elementary and the secondary schools, and rather complete bibliographies on methods of teaching and books for both texts and references. The course suggested for Grades I–III aims to lay the foundation for good citizenship by developing in the children such civic virtues as obedience, cleanliness, orderliness, honesty, courage, and the like, as applied to the home and school; and that for Grades IV–VI emphasizes community service, especially that rendered by those who furnish food, water, clothing, shelter, fuel, and medical aid. The course for the junior high school centers around fifteen topics which are outlined briefly in the report.[1] The course suggested for the senior high school deals wholly with state and federal government. An outline, which merely aims to suggest a method of approach, is presented for both phases of this work. On the whole, the report is of considerable value and is well worth a careful perusal by civics teachers in both junior and senior high schools.

The pamphlet on *The Social Studies in Secondary Education* is made up of four parts, namely, Introduction; "Social Studies for Seventh, Eighth, and Ninth Years"; "Social Studies for the Tenth, Eleventh, and Twelfth Years"; and "Standards, Preparation of the Teacher, and Text Material." A brief summary of each of these follows.

The Introduction is largely concerned with presenting the point of view of the committee and a general outline of social studies for secondary schools. Four things are emphasized in the point of view: viz., social studies require socialization; the immediate needs of the pupils should determine the selection of topics and the organization of the subject-matter; detailed outlines of courses tend to fix instruction in stereotyped forms; and effective social training in the high school demands that more consideration be given to its organic continuity with the work of the elementary school in the same field.

[1] With one exception these topics are the same as those prepared and worked out in detail in a pamphlet published by the United States Bureau of Education to which attention is called elsewhere in this article.

Digitized by Google

The "cycle" plan of organizing the courses in the social studies in the junior and senior high schools is proposed, the first cycle consisting of geography, European history, American history, and civics; the second, of European history, American history, and problems of democracy—social, economic, and political.

The social studies proposed for the seventh, eighth, and ninth years are geography and European history, each to be given one-half year in the seventh, civics being taught as a phase of both; or European history, one year, both geography and civics being taught as phases of history; in the eighth year, American history and civics, each one-half year, geography to be taught incidentally to history; in the ninth year, civics, making much use of history. The major part of the discussion in this section is devoted to the one and one-half years' work in civics, the subject which seems to interest the committee most.

For the senior-high-school course, the committee recommends one year of European history approximately to the end of the seventeenth century, one or one-half year of European history since the foregoing date, one or one-half year of American history since the seventeenth century, and one or one-half year of a study of the problems of American democracy. As to the organization of the subject-matter within the history course, the topical or problem method and the selection of topics with reference to the pupils' immediate interests as well as to their general social significance are recommended. Concrete examples are given illustrating how these two things may be done. The bulk of the discussion in this section is devoted to history, the course in the problems of democracy receiving but four and one-half pages.

Standards for testing the value of civics instruction are presented in the last section. Five standards are stated with little comment. Some suggestions on the preparation of the teacher and text material are also included here. It is the opinion of the committee that there will be no lack of suitable textbooks when once we find out what we want to do. As a whole, the report is very stimulating and well worth the careful attention of anyone interested in the betterment of the subject-matter and the methods of instruction in the social studies in junior and senior high schools.

The pamphlet, *Five Hundred Practical Questions in Economics for Use in the Secondary Schools*, submitted by the committee of the New England History Teachers' Association, has value for at least two groups of teachers. The teacher of high-school economics will find it valuable in standardizing the material and rationalizing the method of teaching this subject, and those interested in working out a course in the problems of democracy as suggested by the Committee on Social Studies will find the questions helpful guides in selecting the economic material for this course. The definiteness of this report enhances its usefulness. After reading it in connection with the two foregoing, one feels that their value is lessened by a lack of what this one contains as its chief characteristic.

Digitized by Google

BOOKS AND ARTICLES ON CIVICS AND THE TEACHING OF CIVICS

One book[1] and one pamphlet[2] should be included in this review, even though neither appeared in 1916.

Miss Hill's book is both theoretical and practical, the former phase treating the problems of civics teaching and the latter offering practical suggestions for the teaching of civics. Twenty-four suggestive lessons are worked out in some detail in the practical part of the book. Even though a teacher may not use the same topics as herein suggested, she will find many things in these outlined lessons which are applicable to topics other than those proposed by Miss Hill.

The Teaching of Community Civics by Barnard and others is in reality a supplement to the report of the Committee on Social Studies. The pamphlet is made up of a section on aims and methods in the teaching of community civics, one on suggested treatment of the elements of welfare, and one on bibliographical suggestions. The second is of most value to teachers. It contains enough material for all the work usually done in community civics by an eighth grade. No teacher of civics in the junior high school should be without this valuable pamphlet.

To the already existing list of texts in community civics adapted to junior high-school students, three were added during the past year. These include one by Field and Nearing,[3] one by McCarty, Swan, and McMullen,[4] and one by John A. Lapp.[5] All these books are more or less along the same line as Dunn's *The Community and the Citizen*, which first appeared in 1907 and was revised and enlarged in 1914.

The text by Field and Nearing is especially adapted to schools in rural communities. It is well illustrated with scenes of country life. Furthermore, the exercises for investigation and discussion, questions for study and review, and the subjects of the majority of the chapters have to do with the country and country life. The unique feature of the book by McCarty and others is the emphasis placed on the historical phase of the topics treated. For example, the chapter on "Why We Vote in Parties" is immediately preceded by one on "The Industrial Revolution and the Ballot," which in reality is a part of the first-mentioned chapter; the chapter on "Justice" begins with a discussion of the wager of battle, and the one on "Education" with vocational education in the Middle Ages. The practical questions at the end of each chapter are suggestive and more or less helpful; and the appendix of 72 pages contains material of some value for illustrative purposes.

[1] Mabel Hill, *The Teaching of Civics*. Houghton Mifflin Co., 1914.

[2] Barnard and others, *The Teaching of Community Civics*, United States Bureau of Education, Bulletin, 1915. No. 23.

[3] *Community Civics*. Macmillan, 1916.

[4] *An Elementary Civics*. Thompson, Brown & Co., 1916.

[5] *Our America: The Elements of Civics*. Bobbs-Merrill Co., 1916.

Digitized by Google

Lapp says that the object of his book is to teach government as it is organized and conducted. To do this he employs the methods of community civics. Instead of placing so much emphasis, however, on the local community as is done in some other texts, the book aims to emphasize the work of the state and nation along with that of the local community in dealing with such elements of welfare as health and education. If a teacher is looking for a text on which to base the work proposed for the first half of the ninth year by the Committee on Social Studies, he should examine Lapp's book before deciding the matter.

The Committee on Social Studies recommends a course in vocational enlightenment for the last half of the ninth year. A text for such a course has recently appeared.[1] Among other things this book presents a detailed study of the most important life vocations primarily for boys.[2] Mr. Wheatley's experience with a course in vocational enlightenment in the schools of Middletown, Connecticut, enabled him to co-operate in writing a book of much practical value.

A few practical articles on the teaching of civics appeared in the current educational journals during 1916. Those of most value contained descriptions of courses in actual operation. Superintendent Horton's article,[3] which appeared early in the year, is an explanation of the origin, background, general principles, and aims as they relate to the course in the high school at Mishawawka, Indiana. An outline of the course is also given, as well as a rather complete bibliography. The course, as it is now administered, is even more up to date than when Mr. Horton wrote his article. Byron Legg has charge of the work, and information concerning it may be had from him.

The problem of adapting civics to the needs of pupils in special courses is one with which teachers are struggling just now. How one school is solving this problem is described in a recent article by R. D. Leonard,[4] of New Bedford, Massachusetts. The course herein described was organized after a careful survey of the needs and interests of the boys to whom it was to be given. The majority of the work outlined deals with civic conditions and activities. Health, education, recreation, and the like, are organized into units and carried along at the same time by means of an outline in the form of a spiral. Nine levels are included in the spiral. They are arranged according to the principles—from the simple to the complex, and from the known to the unknown. It is necessary to read this entire article before one can get a working notion

[1] Gowin and Wheatley, *Occupations*. Ginn & Co., 1916.

[2] Books of a similar nature which appeared earlier are: Weaver's *Vocations for Girls*, and *Profitable Vocations for Boys*. A. S. Barnes Co., 1913 and 1915.

[3] "Standards for Community Civics," *History Teachers' Magazine*, February, 1916.

[4] "Civics, as Taught in the New Bedford Industrial School," *Education*, October, 1916.

Digitized by Google

of how this spiral scheme is employed. The course as described is very interesting both in method of procedure and in subject-matter.

While making civics practical in an industrial school for boys might seem somewhat difficult, the problem becomes more complex when thought of in connection with a high school for girls. In an article[1] which appeared last spring, Miss Mable Skinner tells how she is solving this problem in a large girls' school. The course herein described is one year in length, the first semester centering around such topics as the family and the state as institutions, and problems of a housekeeper and parent, wage-earner, industry, communities, and the nation. The work is made concrete by visits, surveys, debates, notebooks, and the bulletin board. One must read the article to get a clear conception of what Miss Skinner is really doing.

Before passing to the next section of this discussion, mention must be made of one other article,[2] which describes things as they are actually done. A new civics course has recently been worked out for the elementary schools of Philadelphia. The work for the first six grades has been published.[3] While Mr. Barnard describes the work of these grades in his article, he also mentions that for Grades VII and VIII. From his description one concludes that Philadelphia is willing to accept and adopt the course proposed for these grades by the Committee on Social Studies. If one is familiar with these proposals, little would be gained in the reading of Mr. Barnard's article.

CIVICS MATERIAL ADAPTED TO LOCAL CONDITIONS

The cities that have done something worth while along this line are Newark, New Jersey, Cincinnati, Ohio, and New Orleans, Louisiana. Of these three cities, Newark is easily the leader. Besides *A Short History of Newark*, there has been prepared and published for the use of teachers a manual called *Newark in the Public Schools of Newark*, and forty or more pamphlets dealing with such subjects as the public-school system of Newark playgrounds, Newark city government, and the like, which may be used by both teachers and pupils. Here is a city that has solved the biggest problem relative to the teaching of community civics. What Newark has done, other cities will have to do or be content with a mediocre type of such work.

Cincinnati and New Orleans have solved this problem in a somewhat different way. *The Citizens' Book* contains the necessary material for a rather thorough study of Cincinnati, and *The New Orleans Book* the same sort of material for a study of that city. Both of these books were copyrighted last

[1] "Civics as Taught in the Washington Irving High School, New York City," *National Municipal Review*, April, 1916.

[2] J. L. Barnard, "Training in the Schools for Social Efficiency," *Annals of American Academy of Political and Social Science*, LXVII (September, 1916).

[3] *The Course of Study in Civics—Grades I to VII*. Central Press Co., Philadelphia, Pa., 1916.

Digitized by Google

year. The one on Cincinnati is almost a model in make-up and content. It contains four chapters on history, the one on pioneer life being of great value, and eighteen on such topics as the people of the city, public health, police department, fire prevention and extinction, education, art, music, recreation, and the like. *The New Orleans Book* contains much the same sort of material as that found in *The Citizens' Book;* yet, if one desires a model for working up similar material for his own city, the latter seems more desirable. Both books can be purchased through *The American City*, 87 Nassau Street, New York City.

All the material that has been mentioned in this brief review can be had at small expense, no one item costing much more than one dollar. If a civics teacher desires to reorganize her work and make it fully up to date, she will do well to secure all the material mentioned above, and peruse it with much care. Since the writer has read the whole of practically every book, article and pamphlet mentioned herein, he can speak with considerable confidence as to the value of the contents of each.

The Experimental Determination of Mental Discipline in School Studies. By HAROLD ORDWAY RUGG, PH.D. Baltimore: Warwick & York.

In this study on the transfer of training from one field to another Dr. Rugg gives experimental proof of such transfer and thus relieves the "dogma of formal discipline" of some of the disfavor into which it has been cast by less exhaustive experimenters. He summarizes all the studies that have been made in this field and, using them as a foundation, builds a new superstructure that is scientific and illuminating. The large number of persons, "the training group," to which he gave the various tests, the elapse of time between the beginning of the experiment and its conclusion, the "control group," for absolute check on the experiment, and the natural conditions under which the various tests were given, all contribute to inspire confidence in the conclusions which the author makes.

No student of education doubts the transfer of training from one field to a closely allied field; neither is there a question regarding the "spread" of training to less closely allied fields having "common elements." Dr. Rugg, however, sets out to discover whether there is a transfer to fields totally different from the one in which the training is given. He has made a real contribution to our educational literature.

The problem to which he addresses himself is threefold: (1) Does improvement in one ability spread to other abilities? (2) If so, how far does it spread? (3) Through what agencies does it spread?

Dr. Rugg's solution of the problem is that while the study was made of visualization in descriptive geometry the ability is transferred to solving problems of a completely non-geometrical nature, that the amount of transfer is dependent upon general scholastic ability to "conceptualize," and that the

Digitized by Google

agencies of transfer are the building up of "attitudes of orientation," the increased facility in holding and manipulating a large number of visual elements at the same time, and the development of methods of analysis and attack.

J. HERBERT KELLEY

COLORADO STATE NORMAL COLLEGE
GUNNISON, COLO.

Standards for Measuring Junior High Schools. By ERWIN E. LEWIS. Iowa City: University of Iowa, 1916. Pp. 30.

The numerous students of educational problems who have found difficulty in ascertaining in the midst of conflicting claims just what is meant by "a junior high school," will discover a very satisfactory treatment of the subject in the bulletin recently prepared by Mr. Lewis. Mr. Lewis has made a careful analysis of the diversified literature which pertains to the junior high school, on the basis of which he describes ten major characteristics or "standards," namely: (1) entrance requirements, (2) classification of pupils, (3) grades included, (4) housing, (5) courses, (6) method of promotion, (7) departmentalized instruction, (8) preparation of teachers, (9) student advisory system, and (10) supervised study.

Each of the foregoing points is further defined from the point of view of a standard junior high school. While many readers will undoubtedly differ from the author as to the points which enter into the measurement of the "standard" junior high school, all will welcome the clarifying effect which Mr. Lewis' treatment of this mooted subject affords. The work is introduced by a historical consideration of the points involved and concluded by a well-selected and annotated bibliography of twenty-one titles.

FRED C. AYER

UNIVERSITY OF OREGON

Food Study: A Textbook in Home Economics for High Schools. By MABEL THACHER WELLMAN.

This book seems to have covered the ground pretty thoroughly, and to be a source of reliable information gathered from standard works and authorities. The class experiments are clear and definite, the summary questions and references most comprehensive.

But in an attempt to put the material together for "certain advantages in presentation, as the early introduction of such subjects as meals and serving," a most illogical and confusing plan has been followed. It is quite reasonable to devote the first five chapters to a study of fruits and various methods and principles of preservation, although a general introduction to micro-organisms should precede a specific study of molds, yeasts, and bacteria. The next four lessons, under the heading "Use of Water in Cooking" take up the preparation of *potatoes*, *eggs*, and *cereals*, while later starch and rice are discussed. A much

Digitized by Google

better plan would have based more on the division of "chief food principles," taking up the carbohydrates and principles involved in their preparation, developing that and then discussing eggs as a protein food—not under the head of "Use of Water in Cooking."

The various meal plans can easily be worked in without such a confusion of general principles. So on through the book—the beverage lessons stray from their purpose to a combination devoid of any purpose, and there is a general lack of orderly procedure. A student of this text could scarcely formulate a very definite notion of the five food principles or plans and the general principles governing their preparation, although she might have gathered some accurate information in specific instances. A general rearrangement of the material would make the text much more acceptable as such.

CATHERINE CREAMER

STATE UNIVERSITY OF IOWA

Greek and Roman Mythology. By JESSIE M. TATLOCK. New York: Century Co., 1917. Pp. 370. $1.50.

A review of this book reveals the fact that the most essential and valuable myths can be put in a concise but attractive volume. The author's aim, which is to give an understanding of the peoples among whom the mythology was fostered as well as to familiarize the student with the commoner myths referred to in literature and art, is very well accomplished. The attitude of sympathetic appreciation which the author has taken both in the introductory chapter and in each individual story is almost certain to give the reader the desired attitude toward mythology.

The scope of the book accords with the aim and with the presentation of subject-matter. The high-school student needs a book of mythology which deals with those mythical characters who play such a large part in all classical literature, and which does not attempt to exhaust the field of mythical lore.

The chief merit of this book, which places it above the Guerber and Gayley textbooks on mythology, is its unity. The tendency of previous authors has been to present mythology as a great mass of loosely connected detail. Miss Tatlock has connected the stories in such a way that the young student cannot fail to grasp a large part of the material without testing his memory beyond natural limits. Thus the numerous love affairs of Zeus are rarely told as a connected story, although that is the effective method of presentation. The appendixes are extremely valuable for general reference. The pictures of standard works of art are worthy of favorable comment. The distinct print renders the book more readable than Gayley or Guerber.

ADALINE LINCOLN

VAN BUREN, ARK.

Digitized by Google

BOOK-NOTES

(Detailed discussions of some of the following books will appear later.)

Boletin de la Institucion Libre de Ensenanza. Madrid: Institucion, Pase Del Obelisio, 14, 1916.

FALES, JANE. *Dressmaking: A Manual for Schools and Colleges.* New York: Scribner, 1917. Pp. 508.

Part I presents the development of costume from the standpoint of history and design. Part II considers the materials which are used in dressmaking, and discusses the economic value of various fibers and fabrics. Part III treats design and technique in pattern-making and dressmaking. The text is a distinct acquisition to the literature of home economics.

FULTON, M. G. *Southern Life in Southern Literature.* Boston: Ginn & Co., 1917. Pp. 530. $0.80.

An interesting book. The arrangement and classification of material impress the reader with the fact that the literature of the South is not only distinct but distinguished.

HAZEN, CHARLES D. *Modern European History.* New York: Henry Holt & Co., 1917. Pp. 650. $1.75.

Clear maps set into the chapters which they represent. Profusely illustrated. The emphasis upon social phases of political history.

HEARN, TAFCADIO. *Interpretations of Literature.* New York: Dodd, Mead & Co., 1916. Selected from Hearn's notes. Edited by JOHN ERSKINE, Associate Professor of English, Columbia University. Vol. II.

HORNE, HERMAN H. *The Teacher as Artist.* Boston: Houghton Mifflin Co., 1916. Pp. 62. $0.70.

The chapter entitled "Shriving the Inartistic Teacher" offers considerable food for thought.

JOHNSTON, C. H. and OTHERS. *The Modern High School: Its Administration and Extension.* New York: Scribner, 1916. Pp. 848.

The book is a survey of policies, examples, and suggestions of ways and means of making the strictly socializing work of our high schools more effective and more nearly universal.

LEE, A. *Lessons in English.* Book II. New York: Charles E. Merrill Co., 1917. Pp. 320. $0.68.

The book is based upon Reed and Kellogg's *Higher Lessons in English.* Part I is a formal treatment of grammar adapted to practical use. As far as feasible, the editor has adopted the terminology of the Joint Committee on Nomenclature, the National Education Association, the Modern Language Association of America, and the American Philological Association. Part II treats of the four forms of discourse

Digitized by Google

beginning with the word as the smallest unit. More stress is laid upon models than in the old text and an effort has been made to fit the models to the social interests of the pupils.

Monthly Record of Current Educational Publications. Department of the Interior, Bureau of Education, Bulletin No. 36, 1916.

OPDYCKE, JOHN B. (Editor). Hawthorne's *House of the Seven Gables.* New York: Henry Holt & Co., 1917. Pp. 385. $0.52.

Scholarly introduction and comments. Good for advanced classes.

PALMER, GEORGE HERBERT. *Self-Cultivation in English and the Glory of the Imperfect.* Boston: Houghton Mifflin Co., 1917. Pp. 69. $0.16.

PARK, C. W. *The Co-operative System of Education: An Account of Co-operative Education as Developed in the College of Engineering, University of Cincinnati.* Washington: Government Printing Office, 1916.

PEARSON, FRANCIS B. *Reveries of a Schoolmaster.* New York: Scribner, 1917. Pp. 203. $1.00.

An interesting attempt on the part of a schoolmaster to view himself from the outside.

POTTS, R. M. *Addresses and Papers on Insurance.* Springfield, Ill.: Schnepp & Barnes, State Printers, 1917. Pp. 489.

Proceedings of the High School Conference of November 23–25, 1916. University of Illinois, School of Education, Bulletin No. 17.

Report on the Work of the Bureau of Education for the Natives of Alaska, 1914–15. Department of the Interior, Bureau of Education, Bulletin No. 47, 1916.

ROBERTS, A. W. and ROLFE, J. C. *Cicero: Selected Orations and Letters.* New York: Scribner, 1917. Pp. 439 (of text).

The authors intend the text to be more than mere classical exercises. The maps and plans are clear and well placed. Forty-four pages of introduction are given to an explanation of Cicero's position in Rome, which made his orations timely. The grammatical introduction includes figures of grammar and rhetoric and an explanation of Roman dates. Two hundred pages of notes seem undesirable in a high-school text.

SELLARS, R. W. *The Essentials of Logic.* Boston: Houghton Mifflin Co., 1917. Pp. 343. $1.60 net.

State Higher Educational Institutions of North Dakota. Department of the Interior, Bureau of Education, Bulletin No. 27, 1916. Pp. 204.

A report to the North Dakota State Board of Regents of a survey made under the direction of the United States Commissioner of Education.

SUPPLE, ED. U. *Spanish Reader of South American History.* New York: Macmillan, 1917. Pp. 375. $1.00.

The book is edited with notes, exercises, and vocabulary and has clear maps and interesting illustrations.

Digitized by Google

TATLOCK, JESSIE M. Greek and Roman Mythology. New York: Century Co., 1917. Pp. 372. $1.50.

A very carefully edited and handsomely illustrated book. The clear white paper and large, clean print add greatly to the usefulness of the myths in high schools.

University Training for Public Service. Department of the Interior, Bureau of Education, Bulletin No. 30, 1916.

A report of the meeting of the Association of Urban Universities, November 15-17, 1915.

TEMPLE, H. W. *Practical Drawing.* Boston: D. C. Heath & Co., 1917. Pp. 141.

Progressive course in drawing applied to turning and furniture building.

THOMPSON, D. V. (Editor). Shakespeare's *Macbeth.* New York: Henry Holt & Co., 1917. Pp. 145. $0.60.

The edition will be welcome to high schools for two reasons. All textual criticisms and controversial material have been omitted. There is a good picture of an Elizabethan stage, a clear map of Scotland with important places plainly marked, and suggestive bits showing the various interpretations of Macbeth and Lady Macbeth's characters by such dramatic artists as David Garrick and Mrs. Siddons.

WARD, G. O. *The Practical Use of Books and Libraries* (3d ed., rev. and enlarged). Boston: Boston Book Co., 1917. Pp. 118. $1.25.

A book which all high-school students should be familiar with.

Vocational Secondary Education. Department of the Interior, Bureau of Education, Bulletin No. 21, 1916.

WERTHNER, WILLIAM B. *How Man Makes Markets.* New York: Macmillan, 1917. Pp. 200. $0.40.

Talks on commercial geography made attractive to young children.

WOODBURN, JAMES A. (Editor). *The New Purchase or Seven and a Half Years in the Far West.* Princeton: Princeton University Press, 1916. Pp. 522.

WOOD, C. A. *School and College Credit for Outside Bible Study.* Yonkers-on-Hudson, N.Y.: World Book Co., 1917. Pp. 317. $1.50.

Digitized by Google

[illegible] REVIEW

[illegible]

[illegible]

NUMBER 5

[illegible] QUANTITATIVE AND
[illegible] CREDIT FOR
[illegible] WORK

[illegible]

[illegible] Co., Kansas

[illegible] Kansas, High School for the
[illegible] announcement relative to

[illegible] will count toward graduation

[illegible]

[illegible] reason that pupils who
[illegible] same length of time, to
[illegible] amount of subject-
[illegible], should be encour-
[illegible] of credit a pupil who
[illegible] grades of E in all subjects
[illegible] graduation from high school
[illegible] some college work.

[illegible] the following basis:
[illegible] graduation. At least
[illegible] subject matter. As
[illegible] subject-matter

i,
re
ice
ght
lity.
hese
chool

Digitized by Google

Each pupil doing normal work takes five subjects, four academic and one non-academic. All the subjects are equal in credit value. A pupil who, under this system of weighted credit, makes five grades of I, gets 6 units of credit. At this level he can secure the 18 units of credit necessary for graduation in three years. On this basis a grade of I was assigned a value of 1.2 units of credit; the next highest grade, a II, was given 1.1 units of credit; and the lowest passing mark, a III, was given 1.0 unit of credit.

At our first few faculty meetings of the year this system was discussed. All teachers agreed that it called for a more careful plan of grading than the old system; that, since it was the purpose of this system to encourage pupils to put forth their best efforts in the interests of higher scholarship, they should be made conscious of the way in which teachers differentiate between high and low scholarship; that one of the methods of making a grading system objective is to let pupils know in advance what work will be expected of them for the various grade levels.

It is a custom in this school to issue report cards for pupils every six weeks. At the end of the first five weeks of school I suggested to the members of the faculty that they write down the essential elements which they were going to consider in estimating their marks for the first six weeks' work and hand them to me at the beginning of the seventh week. There were reports from ten teachers of English, eight teachers of mathematics, seven teachers of foreign languages, five teachers of history, three teachers of commercial work, six teachers of the manual-constructive work, four teachers of art, and two teachers of physical-training work. I shall have time to call attention to only a few of the outstanding facts.

The most striking single fact was that teachers teaching within the same department were putting emphases upon different things as bases for awarding grades.

Some science teachers insisted that the "power of observation" must be shown by a pupil before he could get *any* credit. Others never mentioned it. Some insisted that a pupil must recite so many times each six weeks to get a certain grade. Others did not even mention this point. All agreed that all laboratory work must

Digitized by Google

be completed before any credit would be given, and that frequent short tests were necessary as a basic part of their grading system.

The Latin reports showed practically no uniformity on the basic elements of grading. One teacher considered oral work, written work, and tests of equal importance in determining any grade regardless of what each one tests or how each is measured. She said nothing about the quantity of work a pupil should do for a given grade. Another teacher made quantity a definite part of his grading for the advanced work in Latin, and suggested that it should be taken into account in grading beginning Latin. Another teacher mentioned the following system of assigning credit: over 90 per cent equal to I; 80–90 per cent equal to II; 60–80 per cent equal to III; below 60 per cent equal to IV (failure).

One teacher of history made his main distinction in grades on "extra essays and oral reports." Another teacher, grading pupils in the same subject-matter, determined the standing of his pupils by judging them on attention, leading to interest; adaptability to the situation; degrees of initiative; habits of study, and various written exercises. Another teacher determined the difference in grades on the basis of the ability of the pupil to read and to tell in good English what he had read. No other elements were mentioned. Still another teacher took an entirely different basis for estimating grades; he made both the quantity and the quality of the work essentials in determining all his marks. He noted the attitudes of his pupils and tested them for memory, originality, and ability to study and grasp new facts. A study of this report showed that the methods of this teacher were totally different from the methods of the teacher previously mentioned, yet the two were teaching identical subject-matter.

The reports of four teachers of English showed interesting comparisons on salient points in marking English. The first, third, and fourth teachers said absolutely nothing about requiring more work from a pupil who makes the highest grade. The difference in marks was based wholly on quality. The second teacher thought the stronger pupils should do more work with a higher quality. Teachers Nos. 1 and 3 spoke of grading pupils high who do "these things" in "as good a manner" as, or "better than," a high-school

Digitized by Google

pupil is expected to do them. Teacher No. 1 said that the grade of II is the grade "a normal pupil receives when he does good, consistent work which shows gradual improvement." Teachers Nos. 1 and 4 thought a "keen appreciation of literature" was necessary for a high grade. The other two did not mention this point. Teacher No. 2 thought that composition, both oral and written, which showed that pupils had habits of correct use of English should be graded high. Also pupils who have read literature until "phrases and extracts from reading appear in written and oral work" should get high grades. All of the teachers mentioned neatness, accuracy, attendance, and promptness in doing assigned work as essentials for different grades.

Another striking fact was that teachers of non-academic subjects were grading on some of the same essential elements as were teachers of academic subjects.

Throughout these reports teachers were found insisting on "neatness," "accuracy," "observation and originality," "quantity of work"; "I study my pupil hard and give the grades as an incentive and not as a penalty"; "work must be in on time"; "quality is permanent, quantity is cheap in the mechanical world"; "strict attention to class work"; "must show an interest in work"; "application"; "speed"; "good grades on examinations."

Enough of these reports have been mentioned to show (1) that the teachers had but vague notions of the elements which they took into consideration in determining grades; (2) that they had made no clear line of demarcation between the pupil just passing and the pupil doing the most excellent work; (3) that certain salient points are considered in grading all kinds of subject-matter; (4) the need of the co-operation of the faculty in determining in as precise and objective a manner as possible what are the distinguishing differences between work that should be given a high mark and work that should be given a low mark.

In an attempt to meet the needs just pointed out, I used the following plan. I selected from the fifty-one reports which the faculty turned over to me what I thought were the main elements mentioned by teachers of academic and non-academic subjects and had the list mimeographed. I gave each member of the faculty

Digitized by Google

a copy, and asked him to study these elements carefully and to mark opposite each element the ranking he would give it in making up a grade, i.e., mark whether it should be required of a pupil making a grade of I, II, III, or IV. In some cases an element might be required of pupils of more than one rank; for instance, the point "neatness" might be required of all pupils getting a passing mark. From these rankings we obtained the following essential elements for grades of I, II, and III:

THE ESSENTIAL ELEMENTS FOR GRADE III

1.0 UNIT OF CREDIT FOR GRADE III

1. *All the work asked of all the class*, such as laboratory notebooks, themes, oral and written, tests, exercises, map-books, book reviews, notebooks, translations, etc., must be handed to the instructor before any credit will be given.

2. This work must be reasonably neat and accurate. *Poorly spelled* and *illegible work* cannot be accepted for credit.

3. *Good attention* and *steady employment* during the class hours are required of all pupils who are given credit for a course.

The quality of the work for this grade should be 75 per cent perfect.

THE ESSENTIAL ELEMENTS FOR GRADE II

1.1 UNITS OF CREDIT FOR GRADE II

1, 2, 3 as previously given.

4. The average of all test grades must be II.

5. Pupils securing this grade must show some initiative in attacking new work, i.e., they should, by consulting such aids as a dictionary, indexes, collateral texts, etc., by reviewing what they have already learned, and by paying careful attention to the assignment, be able to get the advanced work without *much help* from the teacher.

6. In every particular the quality of the work for grade II should be superior to the quality of the work for grade III.

7. Recitations should be well made without the aid of the teacher.

8. Daily preparation of assignments.

The quality of the work for this grade should be 85 per cent perfect.

Digitized by Google

THE ESSENTIAL ELEMENTS FOR GRADE I

1.2 UNITS OF CREDIT FOR GRADE I

1, 2, 3, 5, 7 as previously given.

9. The average of test grades must be I.

10. Persistent daily preparation of assignments with but little urging and with but little help on the part of the teacher.

11. *Accuracy, neatness, legibility, correct spelling* must be the distinguishing characteristics of the work graded I.

12. The *quantity of work* done by a pupil receiving grade I should exceed that done by a pupil receiving grade II or III.

The quality of the work for this grade should be 95 per cent perfect.

We decided to make the pupils of the school acquainted with these essential elements of the various grades. Accordingly we had the elements for each grade printed, in type large enough to be read easily, on separate cards 19×30 inches in size. These cards are hung in every classroom in the building. Teachers and pupils discuss them frequently throughout the year and especially at the beginning of each six weeks' grade period.

It is evident that this differentiation in the essential elements which go to make up a certain grade, or grades, is primarily a qualitative and not a quantitative one. It will be noted, however, that element No. 12 states that the quantity of work done by a pupil receiving a grade of I should exceed that done by a pupil receiving a grade of II or III. The determining of the quantity of work to be done for a specific grade is a departmental problem. The teachers meet by departments at the beginning of each six weeks' period and agree upon the quantity of work which they will assign for the next six weeks for the various grades. These are written on a strip of cardboard furnished the teachers by the office, and appended to the card of printed essential elements. A copy of these quantitative requirements is filed in the office. I might state in passing that last year the range in the quantity of work expected of a pupil making a grade of III and a pupil making a grade of I was greater than this year. The teachers found that pupils were working to cover the quantity of work assigned and neglecting to check their quality. Also pupils who covered the quantitative

Digitized by Google

assignments expected the grades promised for covering these quantities regardless of the quality of the work. This year the teachers are insisting that the pupils who get high grades must earn them by showing, primarily, superior qualitative work.

The following are examples of the requirements for the six weeks' periods handed to me:

REQUIREMENTS FOR FIRST SIX WEEKS IN 1916–17

BIOLOGY

Grade III on general class requirements

Topics:

1. Biology and environment.
2. Relations existing between green plants and animals.
3. Study of plants, a flower, parts, pollination, relation of insects, etc.
4. Living plants and animals compared.
5. Seed growth.
6. Need of foods. Plants and animals. Field and laboratory work. Text as guide.

Three class types required

1. Study and recognition of trees and fruits by leaves, bark, etc.
2. Collection and mounting of 40 insects.
3. Collection and pressing of 40 fall flowering plants and weeds.
4. Assigned exercises on foregoing topics as laboratory work.
5. Report on one reference reading from assigned list.
6. Collection of clippings from current newspapers and periodicals.

Grade II

As above. With 5 more plants and insects, additional reference work, and laboratory work.

Grade I

As above. With 10 more plants, 10 more insects, additional reference work, and laboratory work.

REQUIREMENTS IN ENGLISH, OCTOBER 23 TO DECEMBER 1, 1916

ENGLISH 1–2

Grade III

1. Grade III in recitations.
2. Grade III in all class exercises.
3. Written themes, 3.
4. Oral themes, 3.
5. Classic, "Short Stories," 6 stories.
6. Spelling rules 1 and 2, and "a" and "b" words in *Manual*.[1]

[1] Our English teachers last year published a manual containing certain principles of grammar and rhetoric which all Freshmen and Sophomore pupils must master.

Digitized by Google

7. Figures of speech: simile, metaphor, personification.
8. Home reading, 3 marks.[1]
9. Reading report, 1 (written).
10. Memorize "Call of Kansas."
11. Comma rules in *Manual*.

Grade II

1. Grade II in recitations and class exercises.
2. Same as 3–11 in III.
3. Other work: 3 book marks or 3 written themes.

Grade I

1. Grade I in recitations and class exercises.
2. Same as 3–11 in III.
3. Other work: 6 book marks or 6 themes (written), or 3 book marks and 3 written themes.

ENGLISH 3–4

Grade III

1. Grade III in recitations.
2. Grade III in class exercises.
3. Oral themes, 3.
4. Written themes, 3.
5. Comma rules in *Manual*.
6. Adjectives in *Manual*.
7. Verbs in *Manual*, first 24; sentence exercises.
8. Figures of speech.
9. Classic, "Ancient Mariner."
10. Home reading, 3 marks.
11. Reading report, 1 written.
12. Memorize "Ichabod."

Grade II

1. Grade II in recitations and exercises.
2. 3–12 as in III.
3. Other work: home reading, 3 marks, or 3 written themes.

Grade I

1. Grade I in recitations and exercises.
2. 3–12 as in III.
3. Other work: home reading, 6 marks or 6 written themes; or 3 book marks and 3 written themes.

[1] Each book on the home reading list is evaluated as so many *marks*.

Digitized by Google

ENGLISH 5–6

Grade III

Reports on following:

Irving: *Alhambra*, 5 stories; *Tales of a Traveler*, 5 stories; *Sketch Book*, 5 stories.

Bryant: 10 poems.

Cooper: one book (home reading).

Memorize "To a Waterfowl."

All class exercises.

Halleck: chapters ii and iii.

Grade II

As under III and 3 book marks or 10 reports.

Grade I

As under III and 6 book marks, or 20 reports, or 3 book marks and 10 reports.

A clear and definite differentiation in the work expected of the pupils for the various grades is made by our teacher of cabinet-work. The following list of projects with their evaluation in points, and the list of instructions are posted where all pupils may read them.

LIST OF PROJECTS, CABINET DEPARTMENT

Project	Points	Project	Points
Phone stand	10	Dressing table	20–40
Blacking stand	10	Music cabinet	25
Umbrella stand	14	Settee	25
Chair	18	Morris chair	25
Piano bench A	18	Rocking chair	22
Piano bench B	18	Center table	15
Piano bench C	20	Plate rack	8
Medicine cabinet	20	Hall tree	18
Checkerboard	10	China cabinet	35
Glove box	8	Buffet	45
Pedestal	12	Sewing chair	18
Serving tray	8–10	Typewriter table	16
Cedar chest	20–30	Porch swing	20
Library table	20–35	Center table	20

All projects designed by pupils other than those on the accompanying list must be submitted to the teacher for approval and given the number of points allowed for construction.

Digitized by Google

Points are arranged according to tool processes, construction, and finish.

Requirements in Cabinet-Work

Grade III

Thirty-four points must be made with an average of at least 70 per cent.

Any number of the foregoing points may be made by the pupil by doing general shopwork. Part of each pupil's time is to be spent doing general shopwork and credit is to be given according to the amount and quality of the work done.

A pupil must:

1. Form the habit of taking proper care of the tools and returning them to their proper places.
2. Learn that his job is not the only job in the shop and that he must have due regard for the work of others and be careful not to do anything that will injure or prevent another pupil from getting the best results from his labor.
3. Learn that the time that he takes to do a piece of work is often the greatest factor in the cost of the article, and that, no matter what his future line of work may be, his employer will rate his value to him by what he can do, how well he can do it, and how long it takes him to do it.
4. Learn that to work the problems out in the shop correctly requires him to do just as much thinking, just as much planning, as it does to do the work in any of his other classes, and that his shopwork calls for an application of the subject-matter that he is taking in other classes.
5. Learn that he is only a factor in the daily routine of life, and that often it is how well he does his part and how well he co-operates with others that determines the success or failure of the undertaking at hand.
6. Not expect to receive direct answers to questions he asks about work when such answers are found on the drawings, or when the answer may be obtained from some part of the project he has on hand, or by the application of a little systematic thinking and simple mathematics.
7. Make all his construction work substantial, and have all finished parts reasonably well cleaned of all blemishes, and at least one coat of stain, one coat of shellac, and one coat of wax applied.
8. Learn to sharpen all edge tools properly on the oil stone and grind at least one jack plane cutter, one smooth plane cutter, and one chisel.
9. Know the names of all the tools used in the shop, how to set them up and use them properly.
10. Be able to tell the difference between a cross-cut saw and a rip saw.
11. Know the common wood fastenings, common nails, casing nails, finish nails, flat-head, round-head, and oval-head screws.
12. Know what gimlets are and how to tell the size of them.
13. Know what auger bits are and how to tell the size.
14. Know what Forstner bits are and how to tell the size.

Digitized by Google

15. Be able to file and burnish a cabinet scraper properly.

16. Be able to square up framework by the use of the diagonals.

17. Know what glue is, how it is made, and how to prepare it for use in the shop.

18. Know the kinds of joints commonly used in cabinet construction and how to make them.

19. Be able to recognize the different kinds of wood commonly used in the shop.

20. Know the methods of sawing lumber and the reasons for quartersawing and the advantages to the cabinet-maker.

21. Be able to read a simple working drawing.

22. Be able to make out a bill of material for a small project.

23. Be able to figure the amount of lumber, board measure, that is required to make a given project.

24. Know the use of stains, fillers, shellac, varnish, sandpaper, pumice stone, rotten stone, rubbing oil, and steel wool.

GRADE II

All requirements for a grade of III apply to a grade of II.

Forty points must be made with an average grade of at least 85 per cent.

All construction work must be substantial and well squared up.

All joints must be made properly and well fitted.

All blemishes, pits, plane marks, and saw marks must be removed so that after the stain, filler, and varnish are applied the project has a smooth, clean appearance.

All edge tools used by the pupil must be properly ground by him and sharpened properly on the oil stone.

The pupil must show some ability to go ahead with his work properly without the constant supervision of the teacher.

GRADE I

All requirements for a grade of III and II apply to a grade of I.

Fifty points must be made with an average grade of at least 95 per cent.

All construction work must be rigged well, squared up, and done in a masterly way.

Broad surfaces must be well leveled.

All parts to be finished must be free of all marks that detract from the finish of the product.

All coats of finish necessary to give the right kind of a finish to the project, must be applied properly.

All layouts must be done accurately by the proper methods.

The pupils must be able to work accurately to the given dimensions.

The pupil must show a marked ability to solve the problems in the shop without the aid of the teacher.

Digitized by Google

For the last half of the school year 1915–16 I asked each teacher to hand to me her distribution of grades. The card used for this purpose follows:

DISTRIBUTION OF GRADES

..... Teacher ..... Date ..... Subject

		I	II	III	IV
Boys	Number enrolled....				
	Per cent.....				
Girls	Number enrolled....				
	Per cent.....				
Both	Number enrolled....				
	Per cent.....				

From these cards I had graphs made for the various departments and we discussed them at faculty meetings. A large percentage of pupils were getting excess credit. The teachers attributed this to the fact that it had been customary for pupils to make high marks in this school and that pupils met the quantitative assignments.

The year closed with the distribution of grades shown in Table I:

TABLE I

	Grades			
	I	II	III	IV (Failure)
1915–16....	21.0	27.7	38.7	12.6
1914–15....	33.6	36.8	24.2	5.4

This distribution is far from what is known as a normal distribution, but as compared with the distribution for 1914–15 it was much nearer normal.

The results of the first year's (1915–16) work under the system of quantitative and qualitative credit were studied at the opening

Digitized by Google

of school this last fall by the faculty as a whole and by departments. The teachers were well pleased with the principle of the system, but felt that the following changes in administering it should be made: (1) If pupils are to be given excess credit for superior work they ought to be penalized for inferior work, but not failed except for very inferior work. (2) The emphasis in urging pupils to do superior work ought to be placed on a higher quality of work and not on a greater quantity of work. (3) Teachers ought to study their distribution of grades and be sure that pupils are assigned the credit due them. (4) Pupils should be made to compete within their own class; that is, Seniors should not be allowed to enter Freshmen classes and get the same credit as Freshmen for the same work.

In conformity with recommendation (1) the credit system illustrated by Table II was adopted:

TABLE II

	Grades					
	I	II	III	IV	V	VI
Credit value in units	1.2	1.1	1.0	0.8	0.5	0.0
Percentage.....	95–100	85–94	70–84	65–69	60–64	Below 60

The wide range of 70 to 84 per cent inclusive for a grade of III was made because we felt that the pupils who fall within this range would most nearly represent the "average group," if there is such a group, and our work ought to be so planned that this group should be given the normal unit of credit. No credit was assigned to work graded lower than 60 per cent, because we use the plan of supervised study in our school. We have 60-minute periods in the clear. Approximately one-half of the time is given to study and one-half to recitation. The 0.5 of a unit credit should mean that a pupil has done more than merely sit in a recitation room and absorb what is going on. To reach 60 per cent even a bright pupil must put forth some effort. Also the slow pupil by working hard can get at least 60 per cent of the total work.

Digitized by Google

The pupil's grade card contains the following explanation:

SCALE OF GRADING

Eighteen units of credit are required for graduation, twelve of which must be in group 1. (*Group 1 subjects are the purely academic subjects.*)

A grade of I gives 1.2 units credit. A grade of IV gives 0.8 unit credit.
A grade of II gives 1.1 units credit. A grade of V gives 0.5 unit credit.
A grade of III gives 1.0 unit credit. A grade of VI gives 0.0 unit credit.

Teachers make it clear to the pupils that this fractional credit is an administrative device for rewarding them for efforts expended and that probably outside of this school system it is valueless. As no fractional credit is given in a subject pursued less than a full year, no pupil has to repeat a subject in which he has less than a unit's credit.

A pupil is expected not to make a sequence of a subject in which he cannot earn a unit of credit. The only exception to this is English. In this we shall probably do as other schools have done, viz., enrol pupils according to their abilities.

When we commenced the study of the previous year's distribution of grades this last fall, there was some doubt on the part of a few as to the significance of this work. To get my point of view of this matter before them I issued a bulletin setting forth the leading scientific studies which have been made in the standardizing and distribution of grades.[1] This bulletin was the subject of discussion in the first faculty meetings.

After much discussion of this bulletin we agreed that each teacher should graph her grades before giving them out. The "Distribution of Grades" card shown on p. 319 was devised.

We have not adopted any particular curve of distribution. The distributions for the first three six weeks' periods for this year are shown in Table III.

Various meanings may be read into these figures. According to the testimony of the pupils and teachers of our school they mean that the standards of the classroom work have been raised this year and that pupils are more nearly classified according to their efforts and abilities.

[1] We are compelled to omit the admirable bulletin which Mr. Bailey mimeographed for his faculty.—THE EDITOR.

Digitized by Google

DISTRIBUTION OF GRADES

(USE ONE CARD FOR EACH SUBJECT TAUGHT)

Teacher ..... Date ..... Subject .....

	Number Graded	Passed with Grade of III or Better		Permanently Withdrawn		I		II		III		IV		V		VI	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Boys.....																	
Girls.....																	
Both.....																	

N.B.—Determine the per cent to tenths of a per cent. For example: 9.8%.
Be sure your per cents total 100.0%. (Over)

Please graph the grades shown on the opposite side of this card according to the following key: Show grades of "Boys" by broken lines — — —; "Girls" by dotted lines .....; "Both" by whole line ———

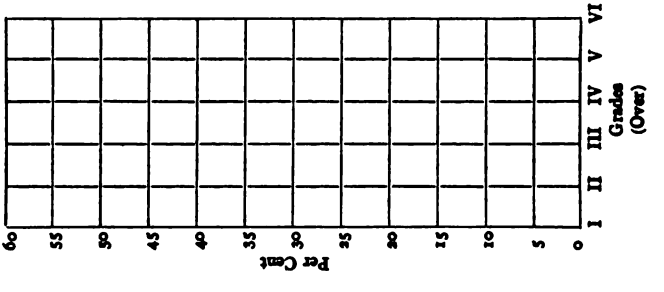


TABLE III

	Grades					
	I	II	III	IV	V	VI
Credit values.....	1.2 Units	1.1 Units	1.0 Unit	0.8 Unit	0.5 Unit	0.0 Unit
First 6 weeks.....	5.4	21.8	49.0	13.8	6.7	3.3
Second 6 weeks.....	9.0	21.0	49.6	13.3	4.6	2.5
Third 6 weeks.....	9.7	23.9	44.2	15.0	4.8	2.0
Year 1915–16.....	21.0	27.7	38.7	12.6—Failure		

Digitized by Google

In order that this graphing may not degenerate into a mere mechanical device of shifting grades to make a certain curve to please administrative officers, we are planning this spring to give to all departments tests devised by impartial parties.

Personally, I do not believe that any system of grading and especially a system which utilizes the principle of quantitative and qualitative credit can be successfully operated without giving very careful attention to the distribution of grades.

The matter of sequence referred to above has been met by the following regulation:

With a view to keeping pupils working in the classes where they belong intellectually and to provide for proper sequence—beginning this year—*all Junior and Senior pupils must select at least three-fifths of their subjects from the subjects listed for their respective years. Full credit will be given a pupil for a subject chosen from those listed for the class one year in arrear. Every subject taken two years in arrear of one's class shall be counted toward graduation at the rate of 0.2 unit less credit than the grade value earned:* that is, a fourth-year pupil taking a second-year subject or a third-year pupil taking a first-year subject shall receive only 1.0 unit of credit toward graduation for a grade of I, whereas a second-year pupil or a first-year pupil shall receive 1.2 units' credit for the same grade. *Every subject taken three years in arrear of one's class shall be counted toward graduation at one-half the grade value earned:* that is, a fourth-year pupil taking a first-year subject shall receive only 0.5 unit credit toward graduation for a grade of III, whereas a first-year pupil shall receive 1.0 unit credit for the same grade.

There is still one integral part of the scheme of administering this system which we recognize but which we have worked on only in so far as has been heretofore pointed out in this paper. I refer to the standardization of subject-matter. We believe that every subject in the curriculum should be standardized on some such plan as suggested by Dr. Judd in his address before the North Central Association of Colleges and Secondary Schools in 1916. That is, the subjects should be standardized with relation to each other, with relation to the methods employed in teaching them, and with relation to the subject-matter contained within them. This

Digitized by Google

is surely necessary before we can feel that varying credit in one school will mean or even approximate in meaning the same as varying credit in another school.

Our experience in administering the system of quantitative and qualitative credit for high-school work has brought us to the conclusion that the principle is sound, fair, and practicable under the following conditions:

1. Teachers should make a practice of putting clearly before their pupils the essential elements, stated quantitatively and qualitatively, which they are going to consider in making up the various scales of credit. This helps pupils to direct their energies more economically and more intelligently, and they will do their work more willingly and with greater interest, and take the grades assigned them with the feeling that they have received what they earned.

2. Teachers must be made to study the distribution of their own grades and the grades of the entire faculty. Possibly it would be well in high schools with large enrolments for the principal with his faculty to decide on some definite mode of distribution similar to those reported in use in the colleges and universities referred to in my bulletin.

3. Pupils must not be allowed to make excess credit in subject-matter which is not intended for pupils of their advanced intellectual attainment.

4. Curricula, subjects, and methods must be more fully standardized before the system of quantitative and qualitative credit can mean the same thing in different schools.

Digitized by Google

A STATISTICAL METHOD FOR THE TREATMENT OF SCHOOL-SURVEY DATA

L. L. THURSTONE
Bureau of Applied Psychology, Carnegie Institute of Technology, Pittsburgh, Pennsylvania

The object of the following pages is to present a statistical method which shall enable the city school superintendent to apply educational test data directly in the solution of those administrative problems which are most intimately concerned with the educational efficiency of the system.

If we consider the administration of a city school system we may discriminate between that administrative work which is concerned with the teaching and learning processes as such on the one hand, and all the other administrative work which is concerned with related but non-educational matters such as the size and location of windows, janitors' salaries, the per capita cost of teaching sewing, school lunchrooms, school taxes, and the like. Thousands of these problems are of administrative importance, but the *raison d'être* of the whole school is the teaching and learning processes, and these should be the central topic of school surveys and school reports.

This strictly educational aspect of school administration may be divided into three separate problems: (1) What is to be taught? This is of course the question of deciding upon the content of the curriculum. (2) How should it be taught? This is the question of deciding upon teaching methods. (3) How efficiently is it actually being taught in this particular city at the present time? This category may be called "educational accounting" to distinguish it from other forms of accounting in which we keep tab on the efficiency of the financial part of the administration.

Closely related to this category of "educational accounting" is that of "educational research." If the relative efficiency of two teaching methods were experimentally investigated, the results

Digitized by Google

would be generally applicable, and to that extent they would constitute a contribution to educational science. But if we investigate by periodical tests the relative efficiency of a particular school system, a particular school, a particular teacher, or the individual pupil, such work is of course not generally applicable. It does not constitute scientific research. It is simply determining the efficiency with which some particular work is carried out. Such work may be more properly called educational accounting.

In educational accounting there are four separate problems. These involve four types of comparison:

1. The relative rank of the school system as a whole when compared with the teaching efficiency of a large group of school systems, measured by means of educational tests.

2. The relative rank of a school within the city when compared with the teaching efficiency of all the other schools in the same city, the measurements being made by means of educational tests.

3. The relative rank of each teacher in the city when compared with the teaching efficiency of all the other teachers of comparable class in the same city.

4. The relative rank of each pupil in the city when compared with the school and test performance of all other pupils of comparable grade in the same city.

An unfavorable report in the first comparison gives warning to the superintendent that he is not succeeding in maintaining the average scholarship standards of other comparable school systems.

An unfavorable report in the second comparison gives warning to the principal concerned that he is not maintaining the standards of other schools of comparable class.

An unfavorable report in the third comparison serves to warn the individual teacher that her teaching efficiency in the subject concerned is below the average of other teachers in the same city.

The reports concerning individual pupils would be of great service as auxiliary data for determining promotion and the skipping of grades.

Let us consider first the comparison of the school system as a whole with other comparable systems. The data for the accompanying figures, which are only illustrative of the method, were

Digitized by Google

selected from the Des Moines Annual Report, 1915. In this report (p. 17) we find a table of city average scores in fifth-grade spelling tests, for a number of cities. In Fig. 1 these scores are arranged on the axis of abscissae (horizontal axis). The percentile ranks of the cities are arranged on the axis of ordinates (vertical axis). The use of the chart may be best illustrated by an example. Suppose that the average score in a spelling test given to all the

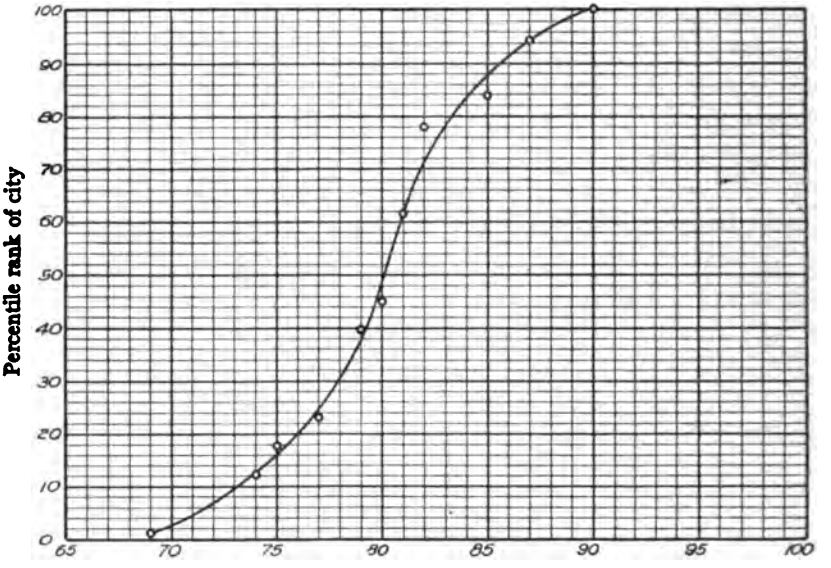


FIG. 1

fifth-grade pupils in a city is 85. Then that city will have a percentile rank of 88 per cent as read from the chart. By this rank of 88 per cent is meant that among one hundred cities, the city in question ranks eighty-eighth from the bottom. There are, then, 12 cities among 100 whose fifth-grade pupils excel in spelling, and 88 cities whose fifth-grade pupils do worse in the same spelling test. If the city average in the fifth-grade spelling test be 80, the city would rank (according to the chart) about 50 per cent, indicating that there are as many cities whose fifth-grade pupils do better as there are cities whose fifth-grade pupils do worse in spelling.

Digitized by Google

Obviously one city may have a high percentile rank in fifth-grade spelling and at the same time have a low percentile rank in fifth-grade arithmetic. Similarly, the same city may have a high percentile rank in one grade and a low rank in another grade. In order to ascertain the relative rank of a city school system, it would be necessary to give to all the pupils a representative set of tests, and to rate the city system on the basis of an average in which the tests for the various school subjects are pooled. In this manner a percentile chart may be drawn up indicating the relative percentile

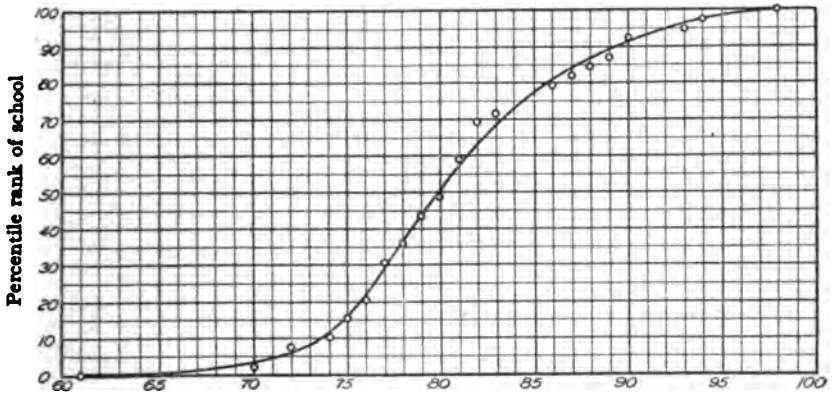


FIG. 2

rank of the city school system as determined by the averages for all the school subjects in all the grades.

In Fig. 2 we have a percentile chart of the various schools in the same city. The data for this table were taken from the Des Moines Annual Report, 1915, p. 83. This particular chart shows the relative percentile rank of the schools within the city system according to scores in a fourth-grade penmanship test. Thus, if a certain school in Des Moines obtains a fourth-grade penmanship average score of 85, the percentile rank of that particular school with reference to fourth-grade penmanship would be about 77 per cent, indicating that 23 per cent of all the schools in Des Moines have better fourth-grade penmanship scores, and that 77 per cent of all the schools in Des Moines have poorer fourth-

Digitized by Google

grade penmanship scores. Thus the efficiency of any particular school may be measured with reference to all the schools of the city. Obviously the method can be applied to any particular subject, or to any particular grade. The median rank in fourth-grade penmanship among all the schools is, according to the chart, about 80. Any school having a fourth-grade penmanship average of 80 is excelled by as many schools in Des Moines as it exceeds.

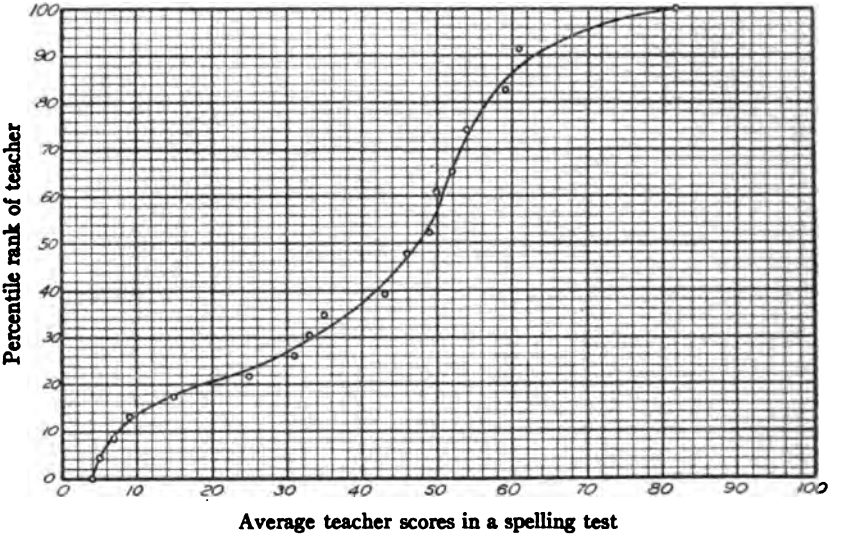


FIG. 3

In Fig. 3 the same kind of chart is plotted for the teachers according to their efficiency in the teaching of spelling. The data are taken from the same report (p. 6). Thus a teacher whose class obtains an average spelling-test score of 30 has a percentile rank of about 27 per cent. This particular teacher is exceeded by 73 per cent of the teachers of Des Moines, while she exceeds 27 per cent of the teachers in the same city in the efficiency of teaching spelling. The average for the whole group is always the score which corresponds to the 50 per cent rank which is in this case a spelling score of 47. Thus any teacher whose class obtains a spelling score of 47 exceeds as many teachers in Des Moines as there are teachers who excel her in the ability to teach spelling.

Digitized by Google

Obviously the results of such tests as these should be published either in chart form or in the form of tables, so that all the teachers throughout the city may compare the scores obtained by their classes with charts or tables and thus determine just where they stand in teaching efficiency as compared with all the other teachers in the same city. The effect on teaching efficiency would certainly be advantageous.

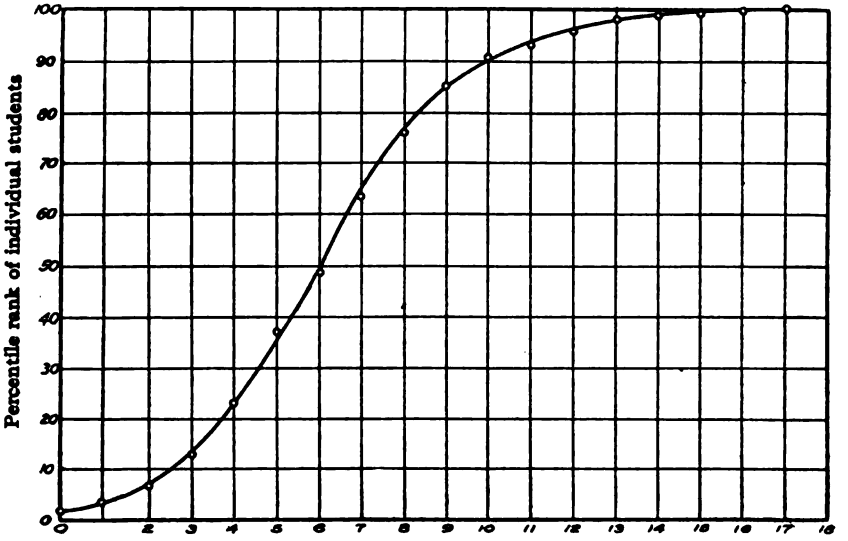


FIG. 4

In Fig. 4 we have the norms of performance of eighth-grade pupils in the city of Des Moines in a penmanship test. (See Des Moines Report, 1915, p. 64.) By means of this chart the relative rank of any eighth-grade pupil with respect to all other eighth-grade pupils in Des Moines can be ascertained at a glance. Thus an eighth-grade pupil who scores 8 in this particular penmanship test would rank about 76 per cent, thus indicating that 24 per cent of all the eighth-grade pupils in Des Moines do better in penmanship, while 76 per cent of the eighth-grade pupils in the same city do worse in this subject.

Digitized by Google

Obviously these records would be of great service in determining whether several teachers, or several schools, or several cities are using comparable standards in their marking systems. The method could also be used to very great advantage as auxiliary data for determining whether a certain pupil is able to skip a grade. When, for example, a certain pupil who is now in the sixth grade obtains a percentile rank of fifty per cent in all his subjects as rated by the seventh-grade pupils, then the rate of promotion of that pupil should be accelerated so as to place him in that grade where, according to his educational test scores, he most properly belongs. The matter of promotion and acceleration would then be less subject to the hazards of personal opinions of teachers. That the educational tests should not constitute the sole means of determining promotion is, of course, obvious.

In stating the problem in this way we are, of course, assuming that we are able to devise fair tests which, when given to school children, will reveal the efficiency of the teaching. On this question there is room for difference of opinion. We may mention several factors which would naturally be thought of as tending to vitiate conclusions drawn from formal educational tests:

a) That the formal educational test does not measure the inspirational and personal influence of a teacher, and that the tests are necessarily limited to the measurement of the efficiency with which the factual material is pounded into the children.

b) That the standard with which the teaching efficiency is compared is the average of the group and not the ideal one toward which the teachers should strive.

c) That two teachers who are equally efficient may have to work with classes which are not of comparable mental caliber, and that the educational tests would give an unfair showing for the teachers who happen to have the less talented children.

The objection to educational tests on the basis that they do not measure the inspirational and personal influence of the teacher on the children, but only the efficiency with which the fundamental facts are learned, may be fairly answered by admitting the limitations of the educational tests. They do not, of course, attempt to measure anything beyond the efficiency with which the factual

Digitized by Google

material of the instruction has been mastered. But at the same time it must be admitted that the mastery of the factual material of school instruction, especially in the public schools, is one of the most important, if not the most important, object of the teaching work. Any efforts to quantify the efficiency with which this part of the teaching work is carried out must to that extent be laudable. In addition to this consideration we have the fact that a teacher who is efficient in teaching the factual material is in general the one who has the best personal influence on the children. And vice versa, a teacher who is inefficient in giving the factual material is not likely to be inspirationally and personally superior. The exceptions would probably prove the rule.

One might object, at first sight, that this method of measuring teaching efficiency tacitly sets as its standard the average teaching efficiency of the group of teachers considered rather than a high ideal standard. Not exactly. If the teachers whose classes have average scores considerably below the average of the whole group are notified and subsequently improve their teaching efficiency, the obvious result will be that the average for the whole group will also rise. This sets a higher standard of teaching efficiency for the next test and so on. Hence while the basis of comparison is always the average teaching efficiency for the whole group, that average is not a stationary one, since the teachers represented by the scores below the average either improve or gradually become eliminated, thus continually raising the average score for the whole group. Furthermore, such a standard would be more effective in eliminating inefficient teaching than setting up a high ideal standard of performance to be striven for. The average for the whole group of teachers constitutes a standard for which every teacher in the system is to some extent responsible. Its fluctuation will depend upon their own efforts, and their retention and promotion will depend on their relation to this actual and real standard.

A legitimate objection to this method of classifying teachers is that the score obtained by a teacher depends, not only on the teaching ability of the teacher, but also on the mental caliber of the pupils of the class. Two teachers, one of whom has a class of rather dull pupils with unfavorable home influence while the

Digitized by Google

second has a class of bright children from homes of favorable influence, can only be rated as having equal teaching ability if the second teacher obtains a considerably higher class average in the educational tests than the first. This compensation for the mental caliber of the class can be determined empirically by means of general-ability tests which do not depend for their successful solution on the purely informative side of teaching, but rather on the general intelligence of the child. If we have available the records of general-ability tests together with the educational tests, which latter apply to specific subjects, it will be possible to find the proper correction coefficient to be applied to the percentile rank of a teacher. If the class is below the average in general ability the average score for the teacher should be raised. If the class is above the average in general intelligence, the class average score for the teacher should be reduced. The precise mode of applying this principle must await the accumulation of records of general ability and of educational tests before the correction can be more precisely stated. The correction will be small in cities where the children from the different sections of the town are fairly homogeneous. It will be larger where the children from different sections of the town differ considerably in general ability.

Even at the present time, lacking complete data, we could arrive at an empirical correction formula from the variations in retardation conditions throughout the town. To begin with, the method of percentile ranks for teachers could profitably be applied in cities where the bright and dull pupils are fairly distributed among the several schools of the city.

It is, of course, obvious that considerable research work remains to be done before the educational tests will be sufficiently standardized to be considered satisfactory for extensive work. The point which I have tried to make is that in the educational tests and in the percentile arrangement of teachers according to the average scores obtained by their classes, we have available a method which, even in its present form, would be of great service in the inspectorial work of our public schools.

Digitized by Google

ONE YEAR OF SUPERVISED STUDY

THOMAS R. COLE
Assistant Superintendent of Schools, Seattle

It has been very gratifying to note the general interest that is being manifested throughout the country in finding some plan of recitation and study that will add to the accomplishment of the dull as well as of the bright pupil. Hearing lessons recited is no longer considered the main function of the teacher. The practice of assigning lessons in a more or less mechanical manner, with little or no knowledge as to how they are to be prepared, is rapidly becoming antiquated in a modern school system. Supervised study offers an excellent opportunity for the intelligent teacher to give a new interest and meaning to our old form of recitation, which often fails to reach the real difficulty of the backward pupil and retards the pupils who are more efficient.

The forty-five-minute class period does not provide sufficient time for the development of a recitation that can be satisfactorily combined with any form of supervised study. A ninety-minute period is objectionable from the administrative standpoint because it necessitates an additional teaching force and lengthens the school day beyond the time that is of advantage to the pupils. After careful consideration the Seattle high-school day was made to consist of five sixty-minute recitation-study periods. In the academic subjects not more than the first forty minutes of a period are used for the recitation, and the remainder of the period is spent in supervised study. It is not expected that home study will be eliminated, but rather that it will be *directed* far better than has been the case heretofore.

The two general characteristics usually given for conducting supervised study are, first, to find the source of the difficulty of the pupil who is struggling with the lesson, and secondly, to guide him properly ***without giving too much assistance.*** Each pupil's problem

Digitized by Google

is worked out with him individually as far as possible and is not permitted to interfere with the work of the class as a whole. The brighter pupils are given extra assignments which encourage them to work up to their capacity. This can easily be done during the hour period without interfering with the regular lesson development.

At the conclusion of the one year's experience with supervised study in our high schools I wish to submit the results of the plan in the Broadway High School.

The increase in enrolment in the subjects that were formerly given double periods is shown in Table I.

TABLE I

Subject	First Semester 1915	First Semester 1916	Percentage of Increase
Commercial	872	1,190	36
Zoölogy	12	36	200
Physics	177	186	5
Chemistry	78	116	49
Manual arts	181	362	100
Art	102	200	96
Cooking	76	80	5
Sewing	152	217	43

Table I shows an increase of 25 per cent in the number of subjects taken up by pupils, while the increase in the school enrolment was but 10 per cent. This increased subject enrolment was due in large measure to the abolishment of the double period and to the fact that Freshman pupils under the supervised-study plan were able to carry *four studies acceptably*, whereas formerly they were advised in most cases to attempt but three subjects.

The effect upon the cost of individual subjects is worthy of attention and is shown by Table II.

The scholastic records show that there has been a considerable improvement in the number of subjects passed by the pupils. This has been particularly true with regard to the two lower classes.

Table III shows the combined number of subjects passed for both semesters in the Broadway High School for the years 1914, 1915, and 1916.

Digitized by Google

TABLE II

Broadway High School—1915 and 1916

Subject	Pupils per Teacher		Square Feet Floor Space per Pupil		Cost per Pupil	
	1915	1916	1915	1916	1915	1916
English	111	125	4.8	4.6	$22.60	$18.83
Mathematics	106	122	6.9	5.2	24.16	20.11
History	112	126	5.1	4.8	23.33	19.48
Latin	89	108	4.2	4.3	25.41	22.21
German	95	116	4.7	4.2	28.93	21.01
French	96	103	4.3	4.8	24.59	22.45
Spanish	84	109	7.4	5.0	28.80	19.78
Commercial	89	145	11.0	6.9	29.48	19.51
Physiography	133	110	8.4	12.3	22.61	26.81
Physiology	80	118	13.4	11.5	27.24	24.49
Zoölogy	30	120	31.2	13.9	63.63	24.69
Botany	60	112	22.8	12.2	40.76	26.44
Physics	56	93	30.0	23.7	46.06	30.20
Chemistry	62	83	24.4	17.3	51.77	29.41
Manual arts	39	74	94.5	36.4	80.85	43.79
Art	51	91	23.0	16.4	51.86	31.45
Cooking	51	80	28.0	20.9	44.22	30.02
Sewing	61	109	17.7	10.6	36.26	23.95
School	90	117	16.3	13.4	$28.53	$22.26

NOTE.—The cost per pupil in each department is about $5.54 less than the above amount. The $5.54 was added to cover the items of general building expenses for heating, lighting, repairs, power, janitor service, and interest on the parts of the building that are for general, instead of departmental, uses, and the salaries of the employees in the study hall, library, gymnasiums, and principal's office.

TABLE III

SUBJECTS PASSED BY BOTH BOYS AND GIRLS IN BOTH SEMESTERS

	1914	1915	1916
First year	4,126	4,542	5,202
First two years	6,950	7,235	8,669
All four years	9,751	10,480	11,838

Table IV shows the failed subjects at the Broadway High School for the years 1914, 1915, and 1916.

TABLE IV

SUBJECTS FAILED

	1914	1915	1916
First year	529	590	517
First two years	725	753	673
All four years	854	936	873

Digitized by Google

Table V shows the percentage of subjects failed for the years 1914, 1915, and 1916.

TABLE V

PERCENTAGE OF SUBJECTS FAILED

	1914	1915	1916
First year.....	11.4	11.5	9.0
First two years.....	9.5	9.4	7.2
All four years.....	8.1	8.2	6.9

Table VI gives the tabulation of the improvement of scholarship made in 1916 compared with 1915.

TABLE VI

IMPROVEMENT IN 1916 OVER 1915

	Greater Number Passed	Less Number Failed
First year.....	750	63
First two years.....	1,434	80
All four years.....	1,259	63

You will notice that by far the greatest improvement in scholarship was made during the last year, when we had supervised study. In other words, the pupils of the school as a whole are taking more work and, as far as passing is concerned, are accomplishing it better than heretofore. Under the supervised-study plan the first-year study failures have been reduced over one-fifth and the first two-year study failures over one-fourth from 1915 to 1916. The enrolment for the three years considered was as follows:

1914..... 1,740
1915..... 1,816
1916..... 2,006

This increase in the enrolment each year should be taken into consideration in considering the number of students passed and failed each year.

In compiling reports from the teachers as to the value of supervised study, I quote the following:

Digitized by Google

I. What has been the effect of the one-hour study-recitation period on the following?

a) The preparation of your pupils for their class work.

Better	43
Worse	3
Same	11

b) The amount of efficient help you are able to give your pupils.

More	45
Less	9
Same	1

c) The amount of ground they are able to cover well as compared with last year.

More	20
Less	5
Same	35

d) The standard of the work you are able to require of the classes.

Higher	34
Lower	3
Same	20

II. Would it be of any added benefit to have the study period before instead of after the recitation?

No	54
Occasionally	1
Yes	1

In nearly every case where teachers reported aversely to the plan it was due to the fact that they had formerly had laboratory subjects which were given two forty-minute periods each day and were required to adjust the work to the sixty-minute period schedule.

Digitized by Google

THE EDUCATIONAL QUALIFICATIONS AND TENURE OF THE TEACHING POPULATION. II

J. HOWARD STOUTEMYER
Kearney State Normal School, Kearney, Nebraska

C. THE EXPERIENCE OF THE TEACHING POPULATION

The data to be found on the experience of the teaching population are likewise meager and difficult to obtain. Foght found that the average age of the rural teacher when beginning was 19.2 years, which would preclude a very wide acquaintance with the social or intellectual environment and organization of the school. Coffman states that "every third man and every second woman engaged in teaching is under twenty-four years of age. At least one-half of the teachers of this country are little more than boys and girls" (10, p. 235). Not only is there this lack of maturity and lack of academic and professional preparation, but the length of time spent in teaching is insufficient to get beyond the crude apprenticeship stage. Coffman states that one-fourth of the teachers have had only one year of experience, and one-half have had four years or less. Coffman and Jessup concluded from their study of the teachers in the high schools of the North Central Association that "the immaturity and lack of wide experience is shown by the fact that 13 per cent of these teachers have had one year's experience or less; 20 per cent have had two years'; 29 per cent have had three years' experience or less. In cities of 2,500 and under, one-half had under three years; 5,000 and under, one-half less than four years; the median experience ranges from three to eight years, the more experienced being in the large cities" (15, p. 98). Shideler found that the percentage of teachers without experience varied indirectly, and the median years of experience varied directly, with the size of the city. Cities of 2,500 or less had a much larger percentage of inexperienced teachers, and the median years of experience was also much less than for larger cities (7). Coffman found that 77

Digitized by Google

per cent of the rural teachers, 44 per cent of the town teachers, 44.65 per cent of the teachers in cities of 8,000 and over, and 28.6 per cent in cities of 100,000 and over teach five years or less (11).

Table IV presents the percentage of teachers with the number of years' experience from the few states that furnished complete data. From this table it may be noted that the central tendency is three years or less. The black bars in Chart IV represent the percentage of teachers with three years' experience or less and the figures in the unshaded part give the percentage with more than three years' experience. The average of the ten cases is 50 per cent with three years' experience or less.

TABLE IV

NUMBER OF YEARS' EXPERIENCE

(Figures show percentages)

State	Less than One Year	One Year	Two Years	Three Years	Four Years	Five or More Years	Total Three Years or Less
Iowa (1915)	24.4	12.9	12.7	9.5	9.4	31	59.6
Louisiana (1913–14)	.....	15	15	15	11	44	45
Missouri (1913–14)	14	12	11	10	8	45	47
Missouri (1915):							
Town	8	8	9	7	8	60	32
Country	23	18	14	10	8	27	65
Wisconsin (1915):							
Rural	.....	28	21	15	11	25	64
State graded	.....	12	11	15	13	49	37
Grades below high school	.....	19	17	13	10	41	49
High school in country	.....	23	16	14	9	38	53
High school in city	.....	19	16.4	14.3	9.6	40.7	49.7

Just how much value should be placed upon experience in the measurement of teaching efficiency seems debatable. Coffman holds that the greatest correlation between teaching and salary is at six years; increase in salary after six years depends on factors other than experience (11). Boyce maintains that teaching experience is less important than instructional skill, studiousness, or discipline. However, "experience is an important factor in modifying teaching ability. No elementary-school teacher ranked first or second with less than five years of experience. Among high-school teachers three years was the maximum for good teachers. The average experience of elementary-school teachers for the first and

Digitized by Google

second classes was 13 years, and for the last two classes 8.5 years. The average experience of high-school teachers for these corresponding groups was 11.8 years and 6.39 years, respectively" (16, p. 156). According to Ruediger and Strayer:

> The positive correlation between length of service and general merit is significant. . . . . No teacher ranked either first or second who had taught less than five years, and only 4 per cent had taught more than 25 years. . . . . 70 per cent of the teachers in the first rank, 69 per cent of those in the second rank, 40 per cent of those in the second lowest rank, 30 per cent of those in the lowest rank, had taught 10 years or more. This indicates either that teachers keep on improving and passing on to higher rank, for at least ten years, or that the poorest teachers are gradually eliminated from the service. Both factors play a part. From the figures as a whole one may infer that a teacher in the grades reaches first-class efficiency in about five years, and that she maintains this efficiency for about 20 years, and that after about 25 years of service she begins to decline [17, p. 276].

Thorndike holds that experience beyond the fourth or fifth year does not add greatly to the efficiency of the public-school teacher. Yet "the premium on experience has the administrative advantage of encouraging the adoption of teaching as a permanent profession and of preventing frequent changes in the local teaching staff" (18, p. 41).

D. STANDARDS OF QUALIFICATION

A comparison of the educational qualifications and tenure of our teaching population with that of some of the continental countries may aid us in understanding what ought to be our standard of qualification. The rise of modern Germany to a vantage point in every field of activity in the world's work is due to an effective school system and a thoroughly trained corps of schoolmasters. Since the Franco-Prussian War, France has reorganized her schools and trained her teachers for the rejuvenation of her national resources. But we need not limit ourselves to these two world-powers whose present prowess is the result of intensive education: the two small nations, Switzerland and Denmark, afford ample material to prove that the real wealth of a nation lies, not in the abundance of its natural resources, but in a thrifty, intelligent people.

Digitized by Google

The following short citation from Professor Tate's study of Swiss schools presents a sharp contrast to our teacher problem:

> To an American one of the most impressive things connected with the Swiss school system is the stability of the teaching profession. Three-fourths of the teachers are men, and practically all the teachers whom I met have engaged in the business as a life-work. Teaching is rarely used as a stepping-stone to some other profession. There is very little shifting of the teaching force from place to place. I spent ten days with a school inspector in Canton Berne. He has 240 teachers under his supervision; only 12 of them were teaching for the first year in the position which they held. It is no unusual thing for a teacher to spend a long life in one position.
>
> Admission to the teaching profession usually means graduation from the teacher's seminary, which requires for entering an eight- or nine-year course offered in the common schools. Teachers in the Gymnasium or the Middle Schools are usually university graduates. After securing a certificate the Swiss teacher usually acts as a substitute for a year or two before finally being elected to a permanent position [19, p. 27].

Within the last half-century the decadent life of Denmark has been rejuvenated through the work of her schools with an efficient corps of teachers. These teachers must have completed the course of study at the normal school or university before being appointed permanent teachers; non-graduates may serve as apprentice teachers or assistants, but not as regular teachers. Out of 3,812 men, only 141 were non-graduates; out of 1,453 women, 438 were non-graduates. Out of a total of 5,265 teachers, 579 were non-graduates. This presents a sharp contrast to our condition; Louisiana (1913–14), for example, has approximately the same number of teachers, 5,658, yet 3,264 are non-graduates. A second contrast is with regard to the maturity of the Danish teachers. Men teachers twenty-four years old or under constitute only 7 per cent of the total; twenty-nine years old or under, 20 per cent; thirty-nine years old or under, 50 per cent: that is, half of the men teachers are forty years old or over, mature men giving instruction to youth. Women teachers twenty-four years old or under constitute 23 per cent; twenty-nine years or under, 48 per cent: that is, over half of the women teachers are more than thirty years old, and are mature enough to be real leaders in the life-problems of youth (see p. 18). Since teaching is a permanent

Digitized by Google

profession, the teachers feel that it is worth while to grow up with a place, and seldom serve less than ten years in the same community.

> Professional training and long tenures have been wrought with great influence on the rural community life. The teachers are trained for country life and understand its needs. They enter upon their tasks, knowing that they have time to rear well and fundamentally. This results in a community leadership which cannot be hoped from peripatetic teachers, as is the case with teachers in most American school districts who remain in country schools for a term or two, and use them as stepping-stones to town-school teaching or other occupations. Danish rural districts can count hundreds of teachers who would not exchange their positions for a first-class inspectorship in Copenhagen—all because they have been enabled by these fortunate arrangements to hew out for themselves, where they are, an important niche in the educational life of the people [20, pp. 138–40].

In our educational world there is a general acceptance of Schurman's assertions that "we cannot teach what we do not know," and that "we cannot teach as much as we know," for much is lost in the process of transition. Hence it is generally agreed that a teacher should at least have completed the division of our educational system above that in which she would teach. Thus it is not too much to demand that elementary teachers should have completed the high school. Present opinion would add that professional training in an approved teacher-training institution is a necessary part of an adequate preparation. For high-school teachers, it is not too much to demand that they have completed a college course or its equivalent. Present opinion would add that they should have special training in the subjects they would teach, together with instruction in the principles and practice of teaching.

A decade ago low standards and lack of uniformity, according to Cubberly, were the chief weaknesses of our system of certification. "In more than half of the states of the Union it is possible to secure a teacher's certificate and become a teacher with no other educational equipment than a knowledge of the common-school subjects—the merest rudiments of an education. In about one-fourth of the states no examination upon topics of a professional nature is required, and the prospective teacher apparently is not expected to know anything as to the professional side of his or her calling" (9, p. 29). Just how much has been gained in these ten

Digitized by Google

years can only be conjectured; however, the following citations indicate a hopeful awakening.

After May 1, 1917, Idaho makes high-school graduation the standard requirement for all applicants for county certificates. Since July 1, 1915, Iowa has required all applicants to have at least 12 weeks of normal training. Kansas has been raising her standards until she now demands that after May 1, 1919, all teachers shall have at least a high-school preparation. Excepting those with 18 months of successful experience, or graduation from normal or college, after August 1, 1915, all candidates in Minnesota "must have completed a professional course of training for teaching—but not to exceed 36 weeks" (21, p. 393). Missouri has been raising the standard until she requires all applicants after September 1, 1916, to have completed three years of an accredited high school or equivalent; after September 1, 1918, such applicants must have completed four years or equivalent (21, p. 397). In Ohio, applicants for life certificates after January 1, 1915, shall possess the equivalent of one year in normal or college, and after January 1, 1920, two years of such work, not less than one-fourth of which shall be in educational subjects.

Applicants for a one-year or a three-year elementary, high-school, or special certificate shall possess professional training not less than the following: after January 1, 1915, not less than 6 weeks of classroom instruction in recognized institution for training of teachers; after January 1, 1916, 12 weeks; after January 1, 1917, 18 weeks; after January 1, 1918, 24 weeks; after January 1, 1919, 30 weeks; after January 1, 1920, 1 year. Applicants for a one-year or a three-year elementary certificate shall have had at least 1 year's training in approved high school, and after January 1, 1920, 2 years of such training. Applicants for a one-year or a three-year high-school or special certificate shall have had at least 1 year's training in approved high school; after January 1, 1920, certificates of graduation from a first-class high school [21, pp. 408–9].

Oklahoma requires:

After January 1, 1916, no person shall receive a third-grade certificate who has not had an academic training equivalent to one year in an approved high school or at least 10 weeks in an approved professional school . . . . no second-grade certificate unless two years of high-school training, or 20 weeks of professional training; no first-grade unless three years of high-school training, or 36 weeks of professional training [21, p. 412].

Digitized by Google

Wisconsin has made the following specific requirements:

On and after July 1, 1915, no person who shall not have taught in a public school for at least one year shall be granted a country or city teacher's certificate, unless, in addition to passing subjects required by law for such certificate, he shall have completed the state common-course of study, or its equivalent, and shall have had two additional years of instruction in training, one year of which, or its equivalent, shall have been devoted to teacher's professional studies, but graduates of four-year high schools not maintaining training course for teachers shall be required to have one year of training in professional studies, such two years of additional training may be obtained at a state normal school, a county training school, or a free high school having an approved course of study for teachers . . . . [21, p. 426].

Since 1907 Indiana has required all beginners to have completed high school and have had 12 weeks' professional training. For the three-cent wage 24 weeks of professional work is required; and for the three and one-half cent wage, graduation from a teacher-training institution. New York demands that—

no person shall be employed or licensed to teach in primary and grammar schools of any city or district employing a superintendent who has not had successful experience in teaching for at least three years, or in lieu thereof has not completed prescribed course in a state normal school of the state, passed an examination for and received a life state certificate, completed an approved high-school course of not less than four years, and in addition an approved professional course of not less than two years [21, p. 405].

California has reached the highest standards, in that elementary teachers must have high-school preparation and full normal training, and high-school teachers must have completed college and have one year of graduate study, one-half of which is in educational work.

Our educational experience has taught us that low standards of certification and low wages go together. As long as low standards of certification and low wages dominate our school system, so long must short terms of service and constant recruiting of the ranks characterize our teaching population. Many superintendents state that the best-prepared teachers remain longest in the profession, though they offer no statistics showing the extent of this factor. The history of education, including the present-day systems of France and Prussia, shows that the social status of the teacher varies directly with the professional training and fitness on

Digitized by Google

the part of the teacher, and adequate return in salary and social esteem on the part of the state (*22*). The requirement of higher standards of certification is an educational problem; the payment of a just wage is an economic problem depending for its solution on how much money the state will pay for professional training and fitness. If the state required high qualifications and gave in return adequate salary and social esteem, including tenure during efficiency and freedom from dread of dependency and old age, teaching would become not only a stable, but a learned profession, for, as the experience of France has demonstrated, with small need for recruits, training schools could then provide trained teachers for all vacancies.

E. SUMMARY

In the section on the educational qualifications of the teaching population the statistics showed that the educational unpreparedness of the teaching population was the most serious weakness in our school system. Table I and Chart I give for the states represented 60 per cent with high-school preparation or less, and 40 per cent with more than high-school preparation, only a part of which can be called professional training. Owing to recent legislation requiring professional training, Wisconsin, as presented in Table II and Chart II, has a much higher proportion of teachers with more or less professional training.

Chart V presents the data on the educational qualifications, tenure, and experience from states able to furnish data on two or more of these topics. Column I gives in black bars the percentage with preparation beyond the high school, which includes more or less professional training; the striped bars indicate the additional percentage with full high-school preparation. Louisiana had insufficient data for the high-school education column. Missouri shows that 72 per cent of town teachers and 21 per cent of the country teachers were high-school graduates—a part of whom are included under professional training.

Column II presents the percentage of teachers who taught in the same district two years or less. The average of the ten cases is 54.25 per cent serving two years or less in the same district. This is in agreement with the findings in the preceding section that

Digitized by Google

rural teachers remain less than two years of 140 days each, that 40 per cent of high-school teachers are new each year, and that 50 per cent have a tenure two years or less, and superintendents have a median tenure of barely two years.

Column III states the percentage with three years' experience or less. The average of the nine cases is 50.7 per cent with three years' experience or less.

Just how much correlation there is between the three topics has not been worked out. In the case of the town teachers in Missouri with 74 per cent with professional training and 72 per cent with high-school preparation, only 42 per cent have served two years or less, and only 32 per cent with three years' experience or less. In the city schools of Wisconsin only 38.5 per cent have served two years or less; data for total experience would probably have shown the same tendency. In the country schools of Missouri with 56 per cent having some professional training and 21 per cent with high-school preparation, 84 per cent have served two years or less and 65 per cent have three years' or less teaching experience. In the Wisconsin rural schools with 50.7 per cent with professional training, 88 per cent have served two years or less, and 66 per cent have had three years' or less teaching experience. There seems to be a closer correlation between training and total teaching experience for shift of position depends on things other than preparation. In order to raise the standards of qualification, it will be necessary to require that teachers secure adequate academic and professional training for the special work of teaching; that communities make it more profitable for teachers of merit to remain permanently in their service; and that the state raise standards of certifications and give salary and social esteem sufficient to retain permanently in the profession those persons specially fitted by nature and training for the high calling of the instruction of youth.

CONCLUSIONS

The following are some of the more obvious implications suggested by the foregoing data:

1. Education administrative agencies do not have sufficient funds available for the collection and tabulation of statistical data on educational problems.

Digitized by Google

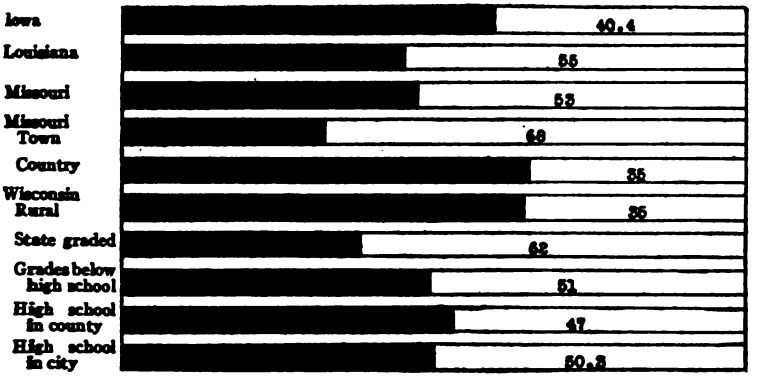


CHART IV.—Black bars indicate three years' experience or less; figures indicate percentage with more than three years' experience. Figures show percentages.

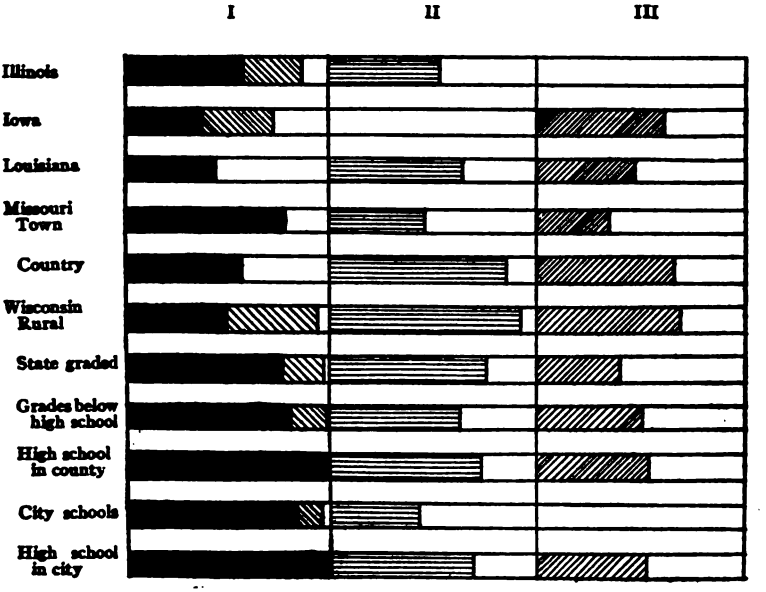


CHART V.—Summary of the preceding tables

Column I: Educational preparation. Black bars, professional training; stripes, high school.—Column II: Length of service in same district, horizontal bars, two years or less.—Column III: Years of experience, diagonal bars, three or less.

Digitized by Google

BIBLIOGRAPHY

1. Monahan, A. C., and Wright, R. H. "Training Courses for Rural Teachers," *Bureau of Education Bulletin*, 1913, No. 2, p. 8.
2. *A Study of Education in Vermont* (Montpelier, Vt.), pp. 117–18.
3. *Preliminary Report on Conditions and Needs of Rural Schools in Wisconsin*, pp. 79–80.
4. Foght, H. W. "Efficiency and Preparation of Rural School Teachers," *Bureau of Education Bulletin*, 1914, No. 49, pp. 22–28.
5. *Report of the State Superintendent of Public Schools in Missouri*, 1914, pp. 322–24.
6. Flexner and Bachman. *Public Education in Maryland* (New York, General Education Board, 1916), p. 176.
7. Shideler, S. E. "Qualifications, Salary, and Tenure of Teachers in Commissioned High Schools in Indiana," *School Review*, XXI, 446–60.
8. Deffenbaugh, W. S. "School Administration in the Smaller Cities," *Bureau of Education Bulletin*, 1915, No. 44, pp. 76–77.
9. Cubberley, E. P. *Certification of Teachers* (Chicago, The University of Chicago Press, 1906), p. 93.
10. Coffman, L. D. "The Mobility of the Teaching Population in Relation to Economy of Time," *Proceedings of the National Education Association*, 1913, pp. 234–41.
11. Coffman, L. D. *The Social Composition of the Teaching Population* (New York: Teacher's College, 1911), p. 87.
12. Reed, A. A. "Tenure of Office in Nebraska Schools," *Middle-West School Review*, IX (June, 1916), 5.
13. *Report of the State Superintendent of Public Education of Louisiana*, 1914, pp. 15–20.
14. Jessup, W. A. "The Shifting School Population," *School Review*, XXI, 512–22.
15. Coffman and Jessup. *The Thirteenth Yearbook of the National Society for the Study of Education*, Part I, pp. 98–110.
16. Boyce, A. C. "Qualities of Merit in Secondary School Teachers," *Journal of Educational Psychology*, III, 156.
17. Ruediger and Strayer. "Qualities of Merit in Teachers," *Journal of Educational Psychology*, I, 276.
18. Thorndike, E. L. "The Teaching Staff in Secondary Schools in the United States," *Bureau of Education Bulletin*, 1909, No. 4, p. 41.
19. Tate, W. K. "Some Suggestive Features of the Swiss School System," *Bureau of Education Bulletin*, 1913, No. 56, p. 27.
20. Foght, H. W. *Rural Denmark and Its Schools* (New York: Macmillan, 1915), pp. 390.
21. Hood, W. R. "Digest of State Laws Relating to Public Education," *Bureau of Education Bulletin*, 1915, No. 47.
22. Stoutemyer, J. H. "The Social Status of the Teaching Profession," *Pedagogical Seminary*, XXIII, September, 1916, 417–40.

Digitized by Google

2. The data generally collected are insufficient to cover the whole field of educational problems, and their arrangement curtails much of their usefulness. One notes with great interest the growing tendency to remedy the above objections, e.g., the reports of Missouri and Wisconsin.

3. The available data on the educational qualifications of the teaching population indicate a serious lack of academic and professional training. In some parts of the United States the average education of teachers is not above the seventh grade; in general, 60 per cent or more of the teachers have not completed a normal or college course. Rarely has practice come up even to the minimum standards-raised for entering the ranks.

4. The constant shift and short tenures of teachers and administrative agencies prevent the development of a permanent, well-laid educational policy either in a community or in a commonwealth.

5. However much or little we value experience, we must conclude that the total term of teaching service is far too brief for the majority of teachers in the United States to have passed through the crude apprenticeship stage.

6. The present educational tendency demands both academic and professional training for teachers, longer tenure in a position, and permanent service in the profession. Comparison with Continental countries reveals the fact that we have neither a learned nor a stable, mature teaching population. In Chancellor Eliot's happy phrase, "We do not have a teaching profession so much as a teaching procession."

Digitized by Google

A CO-OPERATIVE INVESTIGATION IN THE TESTING AND EXPERIMENTAL TEACHING OF FIRST-YEAR ALGEBRA

H. O. RUGG
School of Education, University of Chicago
AND
J. R. CLARK
Parker High School, Chicago

In the *School Review* for February and March, 1917, the present writers announced plans for the complete revision and reprinting of the "Standardized Tests in First-Year Algebra." We now wish to announce that these tests have been revised and reprinted in the light of careful experimentation, and that they are now being distributed, at cost, by the School of Education, University of Chicago, Chicago, Illinois. Samples of these tests will be sent without charge to teachers and administrators who request them.

In their complete form the tests cover sixteen fundamental operations. In addition, there are two preliminary tests which can be given prior to the formal testing to familiarize pupils with the routine of taking "time" tests. The formal tests are printed in compact, easily handled form, as follows: Tests I–IX inclusive and X–XIV inclusive are printed in two $4\frac{1}{2}'' \times 7''$ booklets, and each booklet is planned so as to fit a class exercise of forty minutes. Tests XV ("Graphs") and XVI ("Quadratic Equations with Irrational Roots") are supplementary tests on single sheets that can be given to those pupils who have completed that work. The verbal tests are in the form of lists of "translation" problems, the difficulty of each of which has been scored, and which can be put together easily, in a test, by the teacher. The tests have now been made to include each of the fundamental operations shown in list on p. 347, which have to be mastered in first-year algebra.

The *price* of the tests has now been set at *4 cents per set*. This price merely covers the expense of printing and handling. The tests have been designed primarily in the interest of improving the

Digitized by Google

teaching of algebra. No profit is being made on them. In ordering tests, order a set for each pupil. A set includes (1) Books I and II, containing Tests I–XIV; (2) Supplementary Tests XV and XVI on single sheets; (3) Preliminary Tests A and B. With each order will be included in sufficient quantities (1) complete printed directions for giving and scoring the tests; (2) printed score sheets for records of individual pupils; (3) printed class-record sheets on which class averages can be computed easily; (4) tentative standard scores obtained with these tests in 27 school systems; (5) lists of verbal problems which have been scored for difficulty.

Book I		Book II	
Test No.	Operation	Test No.	Operation
1	Collecting terms	10	Fractional equations
2	Substitution	11	Practical formulae
3	Subtraction	12	Quadratic equations
4	Simple equations	13	Simultaneous equations
5	Parentheses	14	Radicals
6	Special products		
7	Exponents	Supplementary Tests	
8	Factoring	15	Graphs
9	Clearing fractions	16	Quadratic equations (irrational roots)

The chief function of standardized tests is that of "diagnosis." They enable us to locate easily and definitely the difficulties which our pupils encounter in learning algebra. A complete source list of such difficulties can be found in the *School Review* for March, pp. 207–10.

ANNOUNCEMENT OF CO-OPERATIVE EXPERIMENT IN TEACHING ALGEBRA

It was pointed out in the *School Review* articles that the design and giving of standardized tests merely paves the way for the experimental teaching of algebra. During the past year the writers have been designing and trying out various methods of using practice exercises for the perfecting of skill in the formal operations. By the end of the present school year a complete plan will be ready for those who wish to undertake a co-operative study of "best ways of teaching first-year algebra." During the first year of the study attention must be centered largely on the perfecting of

Digitized by Google

habits in manipulating the formal operations. A system of practice exercises has been developed from classroom experimentation. These will be sold at cost at the beginning of the next school year. The exact use of these in the presentation and habitualizing of the formal operations will be set forth in the "Experimental Plan" which will be sent to those who are interested in co-operating. The co-operative study will include: definite teaching problems concerning methods of presenting various operations; the best time to introduce formal practice material for the perfection of skill in each operation; the optimum amount of time to be given to formal drill; the determination of the most effective number of recurring drills on each operation and the elapsed time between them; the recurring use of the Standardized Tests throughout the school year (for this purpose the tests will be printed and sold on separate sheets at the lowest possible price). It is clearly recognized that the largest emphasis must be placed on the reasoning side of learning algebra. In order to make progress in that direction, we must first answer these important questions concerning the perfecting of the tool processes. As soon as definite results appear from the use of the formal material, the attention of the investigation will be centered on the application of formal skill to the solution of reasoning problems. We shall not lose sight of the ultimate aim of teaching our subject, but at the same time we shall recognize clearly that our first job is to determine ways and means of raising the present low degree of skill that our pupils exhibit in using the formal operations. If you are interested in this co-operative experiment address H. O. Rugg, School of Education, University of Chicago, for information. It will be sent before the end of the school year.

ROUND TABLES ON THE TEACHING OF ALGEBRA

Personal conferences or "round tables" of those collaborating in this study will be held at various centers throughout the country, beginning with the next school year. For those situated near Illinois, the first of these conferences can be announced definitely to be held in connection with the University of Illinois High School Conference at Urbana, Illinois, in November, 1917. At these round tables specific questions of teaching, problems and issues

Digitized by Google

arising in the carrying on of the experimental study, will be discussed by those who are taking part. The aim is to make these conferences real "clearing-houses" for the best thought of progressive teachers of algebra on their own classroom problems. Those who are now giving their time to the carrying on of this work desire to get an expression of opinion concerning the best places and times of meeting for such round-table conferences in various portions of the country.

STANDARDIZING THE DIFFICULTY OF VERBAL PROBLEMS

The writers need the immediate co-operation of many algebra teachers to standardize the difficulty of large numbers of verbal problems. *Who will devote one period of his class time within the next month to the giving of a list of verbal problems to his pupils?* Please write us if you can help, stating the number of pupils in your classes. We will bear all expense. You will be asked to do nothing but to give the problems to your pupils in accordance with our directions, and to return the papers to us.

STANDARDIZED TESTS MUST NOT BE COMMERCIALIZED

In closing this announcement may we not urge the co-operation of teachers generally in combating *the present tendency to commercialize testing and practice material? The measuring and experimental movement* probably is the most promising movement for the improvement of school practice that we have seen in our own day. *It must not be commercialized!* This point is emphasized in view of the recent tendency to sell for profit so-called "standard" tests and "scales." Tests are being printed and distributed in large quantities *for profit*—tests which have not been subjected to careful and critical analysis, and about the details of the derivation of which the educational public knows little and can find out little. *It is reported definitely that this is to be done in algebra!* Tests that have been carefully and truly "standardized" provide us with a most valuable experimental device for the improvement of teaching. Tests that are not "standardized"—that is, those for which it is not known exactly what they measure and how they measure it—pretend to do something which they do not do. This must be detrimental to the advancement of the movement for the experimental study of teaching problems.

Digitized by Google

THE EFFECTS OF TRAINING DOWN IN WEIGHT ON THE GROWING BOY AND HOW TO CONTROL OR ABOLISH THE PRACTICE

WILLIAM J. MONILAW, M.D.
Physical Director, University High and Elementary Schools,
University of Chicago

Until recent years the practice of training down in weight for various physical contests has been confined to a very few. Some of us have seen men who have trained down in order to be under the weight limit for coxswains, jockeys, and professional boxers and wrestlers. We have heard some remarkable tales of hardship, deprivation, work, mechanical and medicinal treatment through which these people have gone, and yet we have few facts with regard to the practice or to the results obtained. We have read in papers and periodicals of the premature deaths of several of these contestants; we have read of severe illnesses which have been laid to the practice, and even of deaths through various diseases—the prevailing opinion being that resistance to disease was so diminished through the practice that the disease had its own way. We have given the matter scant attention, for the practice has been limited to the few. The class of people practicing training down has frequently been such that it did not seem to matter much whether they lived or died. We have felt that reports have not always been reliable, and that the habits of some of them have been such that their lives would necessarily be shortened anyway.

But when the practice comes directly home to us, as it has in recent years, when it attacks our own friends, relatives, or students, our interest is awakened. We condemn the practice when adopted by others, but in a "pinch," i.e., when we "simply have to win" a certain event, we are inclined to take the chance and train down our young athlete, feeling that it is "only a matter of a few pounds" and "for only a few weeks." We always think we have a good

Digitized by Google

reason or excuse for our actions, although we do not care to discuss the process with our friends, our boys' parents, or our opponents. We do not care to publish along with the list of winnings and losings a statement of the health of the contestants over a period of three or four years; and we do not take the time to follow up these boys to ascertain whether they are better or worse for their experiences at our hands.

A few years ago some of us became weary of several of the old practices of physical training, particularly that phase of physical training called athletics. Many of us realized that we were doing nothing for our young men; that after school or work hours there was practically nothing of interest save the dance, the pool halls, occasional social events, and loafing (last but not least); that something must be done to train and develop, yes, to save, the young men during their teens. Accordingly, we laid down, or possibly resurrected, a few principles such as these: (1) If athletic sports are good for a few, they are good for all. If they have educational value for a few, they have such values for nearly all. (2) We should not place our major effort on the few strong individuals who need physical training the least, but should extend our efforts to include all the students. Let the star athletes work out their own salvation, and let us do something for the less fortunate individuals who are not strong, or well, or well formed. (3) Athletics well supervised or governed has decided educational value. Unsupervised, or on a low plane, athletics has no value save a possible physical one, and even this may be offset through bad habits learned while participating in competition.

When we found that these principles had once gained a foothold among us, we proceeded to organize in school, church, social center, playground, Y.M.C.A.'s, clubs, and turnvereins in such a way that all might have a chance. We organized teams and leagues with certain weights as upper limits, and, at times, combined both age and weight as a limit. Some of us limited by tests of skill, such tests being made by means of the tape measure or the stop watch. Thus we added one more to our already cumbersome list of eligibility rules.

Digitized by Google

Americans love to "beat the game." This attitude seems to be more prevalent in the United States than in any other country. We will "go up against" the other fellow's game even though defeat stares us in the face. We like to take on odds and then win. We like to win at any cost. When, therefore, we put handicaps of weight and age on some of our boys, all agreed that the system was a grand one and we proceeded to organize our teams accordingly. Then we found a boy here and there a few pounds over weight. This boy, by virtue of his greater weight, was also a star performer. We *must* have him on the team in order to win. So we proceeded to "beat the game." We juggled the scales and were caught. We tried rules of weighing in only once a season and found this method a bad one. We tried weighing in once in two weeks and beat the game at this. Then we weighed in just before every game and to beat this we had to train down to the required weight limit.

This operation of training down has been practiced by nearly every school that has competed in outside athletics with other schools. Various methods have been tried. Some of the more common methods of training down are as follows:

1. Reducing the amount of food and water for twelve to twenty-four hours prior to weighing in.

2. Reducing the amount of food and drink over a period of several weeks or months.

3. Practicing or training extremely hard and for long hours.

4. Wearing an excessive amount of clothing while training to produce great sweating.

5. Taking Turkish baths.

6. Wearing an excessive amount of clothing and then exercising violently for an hour prior to weighing in. This exercise often consists of running from three to ten miles, or "shooting baskets" for a long period and then running a long distance, sometimes in an overheated room so as to produce excessive sweating.

7. Going entirely without food or water all of one day up to the time of weighing in—the late afternoon or evening—and, as soon as weighed, eating or drinking some light food. Sometimes, however, this was not light food, but was made up of some such substances as a "Wienerwurst" sandwich, a ham bun, or the like,

Digitized by Google

swallowed hastily and washed down with some water. Competition followed immediately.

To understand this problem further it must be borne in mind that in nearly all cases in high school we are dealing with boys between the ages of twelve and eighteen years. For this one reason the problem is quite different from that of the man who trains down for coxswain, riding, boxing, or wrestling. These persons are, as a rule, mature and have their development, with the possible exception of the jockey. Furthermore, they are their own masters and therefore responsible for their own acts. In the case of the boy, if he is injured by the process of reduction in weight, the responsibility does not rest upon the boy, but upon the person in charge of the athletic sports.

Another very important point to be considered is the fact that in nearly all cases of reduction we deal, not with the fat boy, who as a rule might be much benefited by some reduction, but practically always with the expert athlete who has grown just a little too heavy for the respective weight. He is not a fat boy at all. In fact he is usually a rangy fellow who is just beginning to fill out. He is usually the very fellow who should be taking on more weight. His bony structure is expanding and his muscles are developing very fast. It seems that in interfering with the growth and development of such a boy we are interfering with nature's process.

Occasionally the reducing is done without the knowledge or consent of the coach or trainer. Sometimes the desire of a young boy to make a certain team is so great that he will secretly reduce. This happens only when the man in charge is weak and permits his charges to injure themselves by such practices. Of course, such instances are rare.

Suppose a boy does train down with the knowledge and consent of his coach. Suppose his coach even advises him how to go about it—how far he may go, what to wear, what to eat, when to eat, how much to train, etc. Do you suppose there are in Chicago, outside of the medical profession, a dozen men, who are working with boys as their physical advisers or as their coaches, who can scientifically advise a boy on such a matter? Half of our physicians would not undertake the job. They do not believe in the

Digitized by Google

practice. If our physicians feel that this is such a difficult matter, how can inexperienced, unscientific men be expected to cope with the situation in such a way as to conserve the health and strength of the boy? They cannot.

We must also consider the nature of the contests in which these boys indulge after they have trained down. All of us will admit that it may be an easy and perhaps harmless thing for a man to train down for the position of coxswain of the crew and then simply to guide the shell and urge on the fellows who are really doing the work. Likewise, it is easy for the jockey whose race covers only a few minutes of time at the most. But the boys who train down are in most cases competing in three of the hardest sports, soccer football, football, and basket-ball. The only other sport to compare with these in point of strenuousness is long-distance running, for which we do not find boys training down.

Of the three sports mentioned, we ought to lay special stress upon basket-ball. This is the one sport of the three in which the boys are on the jump from the beginning of the game till the end. There is seldom any let-up for forty minutes, save one brief intermission. Football is a strenuous game, but fully two-thirds of the time of the game is spent in lining up, in shifting, in penalizing, and in other delays. It is not a game which "winds" the boys. Soccer is more violent than football for some of the players. The linemen and the halves are very busy individuals, yet even they find breathing spells when the ball is in other parts of the field. Here we have three sports for which boys train down in weight, and probably under our present organizations nine-tenths of the training down is for the most strenuous sport on our athletic calendar—basket-ball.

From the physical standpoint alone then we have these conditions:

1. Training down in weight by boys in the ages from twelve to eighteen—not men.

2. Training down and keeping down for a period of several weeks, or even months.

3. Training down by the very boys who should by a normal process be gaining in weight.

Digitized by Google

4. Training down for a long period of time, but especially just before each contest, for the most strenuous sport in the athletic calendar, and participation in this sport usually when tired by the exertion of training down, or by the practice of undereating and underdrinking.

5. Training down without the aid or advice of men who are competent to advise scientifically.

Dr. A. J. Carlson, head of the Department of Physiology in the University of Chicago, writes as follows concerning the facts of training down in weight:

1. Going without food or water for from six to ten hours prior to competition would probably not injure any boy who is otherwise physically fit to participate in strenuous games; but it might lower the vitality of certain types of boys, very lean lads, "going on their nerves," and "playing their heart out" in a game.

2. Eating a slice of toast, a slice of bread and butter, or a sandwich (without meat or cheese) with just enough water or milk to moisten it, just before competition will prove more beneficial (available energy) than injurious (colic or indigestion). A few lumps of sugar or a cake of chocolate would be even more beneficial for the boy who has "trained down." The lad who has plenty of reserve energy does not need anything of this sort.

3. Reducing the quantity of solid and liquid food for a period of several weeks, at the same time doing hard training, is dangerous, except for a fat boy. And even the fat boy should not reduce the water or liquid intake for any considerable time. For the lean boy, this method of reducing weight followed by a strenuous game may reduce vitality to an extent that is even permanently injurious.

4. Reducing weight by working hard with an excess of clothing is essentially reduction by sweating. This should not be done on the day of the game, as it means hard work for the heart, and the boy entering the strenuous game with a heart already partly fatigued is *more liable to heart and kidney injury from the hard work of the game itself*.

The various methods of reducing weight have no *direct* injurious action on the alimentary tract, or on the circulation, except to the extent that they reduce vitality in the *lean* and *highstrung* lad, and they indirectly impair the entire organism.

5. Speaking from my knowledge of physiology I would say, regarding boys twelve to sixteen years of age:

a) The boy who is undernourished or under weight (according to age and weight) should not be allowed to train down at all.

b) The fat boy, provided his fat is due to overfeeding and underexercising and not to disease, may reduce considerably by dieting and exercise without injury if done gradually.

Digitized by Google

c) The lean but well-nourished boy may train down one or two pounds in a scientific way with impunity, but should not be permitted to reduce five or seven pounds.

The results of this practice may be indicated first by citing the outcome of some specific cases.

Case I: X was fifteen years old. He had just finished a rather hard and long season of football during which he played in the position of quarter-back. During the football season he never went below 134 pounds. When X joined the basket-ball squad immediately after the close of the football season he was 4 pounds too heavy for the lightweight team which had 130 pounds for its upper weight limit. He proceeded to reduce by undereating and underdrinking and wearing excessive clothing. On the day of the first game which was to be played at 4:00 P.M., he weighed in at 12:30 P.M. at 131½ pounds. He then went to the gymnasium wearing enough clothing for an Eskimo, worked hard for an hour or more and then went out on the running track and ran about two miles. Upon his return he weighed 129½ pounds. He then went to class and returned at 3:30 P.M., weighed in before the visiting coach, ate an egg sandwich, drank a little water, rested a few minutes and then played violently in the game. For supper that evening he simply gorged himself. This process was kept up weekly for some time and then X found it more and more difficult to reduce, so he began systematically undereating and underdrinking, especially the evening before the day of a game, when he must weigh in. About the seventh week of the season he became so stale and lifeless that others supplanted him on the team, and finally he dropped out because of a "crop of boils." It was at least six weeks before he regained his normal health and spirits. And during this entire period his school work suffered materially.

Case II: Y was seventeen years old, weighed 135 pounds, and wanted to make the 130-pound basket-ball team. He reduced for ten days in the same manner as did X, made the team and the required weight, and played in the games. After a few weeks it became more and more difficult for him to stay down in weight, so he ate and drank less and worked harder and harder. After each contest he was so hungry that he simply gorged himself, and

Digitized by Google

severe indigestion always followed for a day or more. This acute indigestion finally became chronic to such an extent that the boy lost more weight than he wanted to. He then became weak and finally dropped out of the game and was a long time recovering.

Case III: Z was fifteen years old, weighed 148 pounds, and wanted to play on a 140-pound football team, after failing to make the heavy-weight team. He was not a fat boy. He trained hard and faithfully for four weeks and got down just once to the 140-pound limit. Then he went up in weight again and thereafter he couldn't get down. In trying, however, he wore himself out, impaired his digestive system for awhile, and finally gave up and went back to the heavy-weight squad as soon as he was strong enough, which was the very last of the season.

These are the only three cases with which I have actually become familiar, the only cases that I have studied and watched from beginning to end. While these were, as compared with others, very mild, they were enough to cause us to make the unalterable rule that boys in our school shall not train down in weight for athletic events unless they are fat boys who naturally reduce when doing strenuous work.

It should be noted that recently in Chicago two well-known amateur wrestlers died of pneumonia within two and one-half days after the contraction of the disease. Both of these wrestlers were young men who found themselves many pounds too heavy for a specific weight and who trained down to meet the occasion. It seems that both so reduced their resistance to disease that they were helpless when pneumonia attacked them.

A man who has excellent control of himself might deny himself food and drink in a systematic way over a long period and perhaps be none the worse for it. A boy, however, unless he be exceptional, cannot have perfect control of himself. He will deny himself spasmodically and gorge himself as often. This alternate shortage and superabundance of food constitutes irregularity. Even grown people cannot live an irregular life. Granting the statement of dietitians that all of us as a rule eat too much, that we might reduce the amount of food by a large percentage and still be well and strong, this must be done in a perfectly systematic way and

Digitized by Google

must not go beyond a certain limit. And who is to decide his limit? Certainly the boy is not able to judge when he has reached it. Certainly the ordinary athletic coach or physical director is unable to make such decision. Is there any physical director who thinks himself capable of deciding this fine point and who would be willing to take such a responsibility upon himself? A person who so handles a young boy as to injure him either temporarily or permanently is perfectly liable in a legal way and might be prosecuted to the full extent of the law. Isn't it our duty to the young to take no chances with them? Many of our boys overdo in athletics without the connivance of those over them. It has always been my aim in handling boys to try to increase their weight during any athletic season. The ordinary boy in three months' time should always gain a few pounds. If that is the normal thing why should we fight nature in the matter? The trained-down boy has restless sleep, is tired in the morning, and soon goes about his sports in much the same spirit as the ordinary man goes about his work. The joy, the pleasure, the recreation are all removed and only the husk is left. Following this fatigue of several days or weeks, we may expect a whole train of abnormal conditions—indigestion, loss of appetite, restless sleep, dreams, boils, infections, and colds. Soon his game "falls off" and then we heartlessly cast him aside. And how many of these conditions remain with the boy more or less permanently is beyond our judgment.

The word championship has more to do with harm for the young boy than with good. It is for a championship that the boy trains down. Too much emphasis is laid upon the winning, the prize, the honor, and glory, and not enough consideration given to the fun of the thing. The pleasure of competition is lost sight of. Another important item connected with the championship is the coach. This man usually feels that it is "up to him" to make some sort of a showing. His bread and butter seem at times to depend upon it. Certainly his advancement in the athletic world seems to him to depend largely upon his success in winning games with his teams. The coach who feels this way about his job to such an extent that he is willing to take a chance with the health and

Digitized by Google

welfare of young boys ought to be discharged. Someone might say that this training down is no worse than the game of football in which the coach places the boy and permits him to accept risks, even of his life. The cases are not parallel at all. Some games have an element of danger in them and it is a good thing for the boys that they have. Thus they develop courage and fighting instinct. Some chances must be taken in this world. The parent who will not permit his son to take a physical chance will certainly have a mollycoddle on his hands sooner or later.

There is a great modern movement looking toward less competition between teams representing various institutions and more competition within each institution. Home competition has more real fun in it than any big championship match or game that was ever held. In our home matches the boys play for the pure fun of the game. In the larger affairs the fun is largely lost sight of and work and drudgery is added. The fun seems to be in beating the other fellow or the other team, or in gaining the prizes. Before we are again on a sane plane in an athletic way we must get back to the play idea. We have got away from the spirit of play. We are away from it when we play for money, when we gamble, when we play purely or in large part for the valuable prize, when we place undue emphasis upon winning, when we train down in weight and endanger the health of our boys.

The remedy will not be easy, will not come quickly, will not do for all time, but must be constantly applied.

1. We must obliterate the thing which makes the boy want to train down, i.e., the abnormal desire to win. We must not place so much emphasis upon championships. We must encourage the ideal of play and recreation and preach their educational values.

2. We must rule against the practice of training down and put the ruling thoroughly in force and back it up by heavy penalties.

3. We must conduct an educational campaign against the practice—a campaign which will teach parents, educators, physical-training teachers, and boys the harm of training down in weight and offer encouragement to playing in the groups as nature indicates.

Digitized by Google

4. It seems possible that some other measurement than weight may be the determining factor in grouping boys for competition. This is particularly true of basket-ball, in which game it would seem that height is a more important factor than weight. If height is the more important factor, why not classify the boys by height? If this may be done for basket-ball we will eliminate the greater part of the danger, as more boys train down for basket-ball than for any other sport, and basket-ball, as previously stated, is the most dangerous of all sports for boys.

Digitized by Google

EDUCATIONAL NEWS AND EDITORIAL COMMENT

To the Editor of the School Review:

SIR: May I ask for space in the magazine for an expression of official and personal appreciation of the efforts of the many people whose co-operation made possible the successful Conference between the University and Allied Secondary Schools, the sessions of which Conference were held on April 12 and 13, 1917. The assembly of approximately fifteen hundred officers and pupils of high schools in sessions covering the major part of two days is in itself a matter of considerable significance, and the attainment of the aims of such an assembly, professional, academic, and social, obviously involves a great deal of self-sacrifice and the expenditure of thought, energy, and time.

No doubt it is to be assumed that the purposes of this annual Conference are as important in the eyes of high-school officials as of those who estimate them from the point of view of the University itself. Those of us, however, who have regarded these Conferences from the latter point of view and have for many years held the faith that these assemblies find their justification in bringing the University on the one hand and the secondary schools on the other to a plane of common understanding in the working out of problems of mutual importance, and that in this way best we may discover what is sound in educational procedure. The Conference just closed is felt to have justified that faith. No one who was present in the general sessions of the Conference of April can, I believe, entertain any doubt that the result of the discussions is a far clearer common understanding of the problems involved and of how the solution of these problems is related to the present traditional organization of elementary and secondary education.

To the committees who organized the departmental sessions, to those who gave the main addresses, and to all who in any way participated in the Conference, I would like in this way to express appreciation.

Very truly yours,

NATHANIEL BUTLER

Digitized by Google

A Somewhat Brighter Day for Chicago Schools

By a house vote of 110 to 11 and a senate vote of 31 to 1 the Baldwin-Otis bill was sent on April 6 to the Governor of Illinois for signature. To those who hoped that Chicago might have a thoroughly good school house-cleaning, the compromise measure known as the Baldwin-Otis bill is somewhat of a disappointment. At any rate the bill makes possible, we are sorry to say not inevitable, a sane and sensible school régime to supplant the petty politics, confusion, and general inefficiency which have so long prevailed in Chicago. Light may be ahead.

Enter a school board of eleven members, not the board of seven elected at large, which was recommended by the best educational experts of the day. The board of eleven takes the place of the present board of 21, but like the present board is appointed by the mayor and approved by the council. Here appears the usual tendency of lawmakers to give the public just a taste of what they want. The strong hold of politics is hard to break. Here and there a finger may be loosened.

Enter also a triumvirate of three school officers, elected for four years by the school board: the superintendent, the business manager, and the school attorney, equal in rank and with differing duties. If they can pull together, well and good. The *School Review* regrets that the lawmakers were unwilling to give Chicago a superintendent of schools who, as chief officer, as managing official, is supreme in his field, responsible alone to an elective board. But even the Otis bill is a forward step. At least we may expect that even cautious men might become more courageous. To be sure, the independence of any officer can be checked by a two-thirds vote of the school board.

The city council is shorn of all power over school officers except the approval of mayor's appointees and concurrence in the purchase and sale of school lands. Herein, at least, we may rejoice, remembering, however, that an elective board would have been entirely free from the council.

Elaborate provisions guarantee a definite trial procedure for teachers charged with incompetency and insure a tenure of office for competency. This provision, too, is somewhat of a makeshift. But on the whole the smaller board, the relatively independent officials, the diminished influence of the council, and the reasonable tenure of office, although not constituting an ideal program, do constitute progress. Partly, at least, Chicago schools are released from the strain of factional politics. To a certain extent men and women engaged as educators and as teachers may now go ahead with confidence to their tasks. Yes, the teachers might now be independent enough to get rid of their walking delegates.

Digitized by Google

INSTRUCTION PROVIDED BY THE MICHIGAN SCHOOLMASTERS' CLUB

During the last week in March the Michigan Schoolmasters' Club met in its fifty-second annual convention at Ann Arbor. Fifty-two years is a venerable age, but that it need not be a senile age is evidenced by the vitality with which the Schoolmasters' Club lays hold of its tasks. From the parent association several more or less closely affiliated branches have sprung: among them are the Michigan Superintendents' Association, the Short-term Institute for Superintendents, The Institute for Classical Teachers, The Classical Conference, the Michigan Academy of Science, the High-School Principals' Association, and others. Truly this is an imposing array, perhaps altogether too imposing. To an outsider is inevitably given an impression of inco-ordination, over-organization, and confusion. Frequently the same comment has been made concerning the conglomeration of meetings and societies centering around the Department of Superintendence. Regrettable in the extreme is the fact that the science which we call education so often seems to be entirely unscientific in the classification of its interests and in the organization of its efforts.

The secretary of the Club uses one very suggestive phrase in his communication addressed to the *School Review*. He says, "To provide *instruction* for the twelve hundred school men in attendance many speakers of national reputation were secured." The significance of this remark lies in the word "instruction." In this idea is involved a much-needed change, a movement away from the old-time "inspirational" meetings, now happily diminishing in number. Not, of course, that school men do not need inspiration, but the type of inspiration needed by the twelve hundred men gathered in Ann Arbor, or elsewhere, is inspiration which comes from better and broader information.

From this standpoint the most interesting sessions of the week were those of the Short-term State Institute. Three years ago the first conference of this character was undertaken at Michigan with E. L. Thorndike, Teachers College, Columbia University, and L. D. Coffman, School of Education, University of Minnesota, as instructors. The meetings were continued the following year, and C. H. Judd, director of the School of Education, University of Chicago, and G. D. Strayer, of Teachers College, Columbia University, were engaged as lecturers. This year the special lecturers were Leonard P. Ayres, of the Russell Sage Foundation, and Professor Paul Hanus, Harvard University.

In the course of his lecture Dr. Ayres discussed measurement of reading ability, measurement of achievement in handwriting, carrying the community in school surveying; the actuarial basis for industrial

Digitized by Google

education; our new knowledge about school ventilation; and making education definite. The topics of Professor Hanus were: the superintendent's administrative policy; the superintendent's supervising policy; the aims, scope, and methods of the superintendent's report; industrial education prior to and accompanying employment; and the superintendent's educational policy.

Another unique feature was the "Summarization Meeting" held at the close of the week, in which, by five-minute talks, representatives from the several sectional conferences sought to present the gist of the conference discussions—to show what trends the thought in specialized fields is taking, what practical provision is being made for adapting school administration to the advanced theories, and what correlation might wisely be sought and expected from teachers in other departments of the school work. Thus the keynote of the entire convention, instruction, was again struck in the final meeting.

Two Views of Vocational Education

Under the suggestive title "Learning to Earn," John Dewey discussed vocational education at the recent meeting of the Public Education Association in Baltimore. He propounded squarely the educational issue: Shall the purpose of vocational training be the improvement of economic life through the preparation of persons well equipped to better their own conditions; or shall the purpose be the preparation of a better grade of labor to help the United States in the competitive struggle for world-commerce? Dr. Dewey charges that this second conception is satisfied with the happiness of mere contentment in increased skill and possesses no by-product of larger intelligence or power on the part of the worker.

Dewey points out the educational disadvantages involved in the pure trade conception of vocational education: first, the conception puts a premium on a divided or dual system of administration; secondly, instead of developing human beings equipped to reconstruct present-day industry, the second conception limits training to mere vocational skill; thirdly, on this narrow plan the curriculum will neglect history and civics and social studies in general which make future workers aware of their rightful claims as citizens in a democracy; fourthly, this conception will emphasize all that is most routine and automatic in our present system, looking for immediate results rather than understanding; and finally, it will measure its progress by the number of children taking out working papers for whom it succeeds in finding places.

Digitized by Google

In quite the opposite way will proceed "the idea of industrial education which aims at preparing every individual to render service of a useful sort to the community, while at the same time it equips him to secure by his own initiative whatever place his natural capacities fit him for." Working through a unified, not a divided, school system, vocational training of this sort will recognize frankly that traditional elementary education is largely vocational, but that the vocations which it has in mind are at present too largely clerical. This second idea will make much of developing motor skill and manual skill, but not of a routine or automatic type. It will aim at the inventive and creative power of mind. Its purpose will be, not the production of skilled workers for hire in specific trades, but the production of workers who have industrial intelligence.

Thus, says Dewey, is the issue squarely drawn between the industrial and the educational ideals.

The Smith-Hughes Vocational Education Bill

On February 23 Congress passed the Smith-Hughes bill. The administrative agency set up is a series of boards, at the head of which is a federal board consisting of the Secretaries of Agriculture, of Commerce, of Labor, the Commissioner of Education, and three laymen, representatives of manufacturing, of agricultural, and of labor interests. This federal board is instructed to co-operate with state boards which may be set up under any system the states see fit to employ. Here lies the joker in the judgment of men who hold to Dewey's ideals discussed above. The entire emphasis of the bill seems to point to a dual state system of schools. These state boards in turn will co-operate with community boards of control, namely, any local body having charge of public education. Thus apparently in administrative features the bill provides thoroughly democratic control. But it is to be regretted that the federal government is seemingly to throw its tremendous influence in the direction of pure industrial skill as an independent aim in education.

In its subsidy features the bill is very liberal. It provides that the federal government will appropriate dollar for dollar with the states in promoting industrial training. The federal moneys must be distributed as follows: at least 33⅓ per cent must be applied to part-time schools, 20 per cent may be applied for salaries of teachers, and a small percentage for the training of teachers, supervisors, and directors of vocational subjects. Obviously one or more of these interests will be more liberally supplied than the minimum here indicated.

Digitized by Google

The important part of the bill as touching the issue so clearly stated by Dewey lies in sections 10 and 11. The funds are disbursed only to schools lower than college grade which have certain minimum requirements in equipment and teaching staff. Moreover, the schools to be benefited are only those which are *designed to prepare* persons over fourteen years of age *for useful and profitable employment* in agriculture, trades, commerce, and home economics. There can be no doubt whatsoever that the Smith-Hughes bill is designed primarily to promote unadulterated trade education of the second type as characterized by Dewey.

In all fairness it needs to be said that one insignificant passage in section II contains a comforting provision. The passage runs to this effect: "Such subjects in a part-time school or class may mean any subject given to enlarge the civic or vocational intelligence of such workers over 14 and less than 18 years of age." Only in evening schools for adults is the training limited strictly to "that which is supplemental to the daily employment."

All who stand for educational ideals primarily and industrial ideals distinctly subordinate will regard this provision for civic and vocational intelligence as the saving grace. It is too bad that this passage is awarded an inconspicuous place. It would indeed be a sorry day for democracy if any large share of our educational endeavor aimed only to turn out workers. We want workers who have personal, as well as vocational, vision, both supplemented by civic intelligence. Frequently one hears the charge, we hope unjustified, of dollar diplomacy; let there never be raised the charge of dollar education.

The Iowa Teachers' Retirement Fund

A committee of the Iowa State Teachers' Association has reported the following bill and recommended that it be urged before the legislature:

A Bill for an act authorizing the giving of annuities to retired public-school teachers, fixing the term of service and the manner of retirement, and authorizing a tax levy to provide the necessary funds.

Be it Enacted by the General Assembly of the State of Iowa:

Section 1. Any teacher who has completed twenty-five or more years of service, and who complies with all the provisions of this act, may retire upon a life annuity of twelve dollars for each and every year of such service.

Sec. 2. Any teacher who has completed twelve or more years of service in this state may retire upon a life annuity of twelve dollars for each and every

Digitized by Google

year of such service for such mental or physical disability as disqualifies him from continuing successfully in the work of teaching.

Sec. 3. Every teacher upon retirement, either upon completion of term of service or for disability, shall pay or cause to be paid into the permanent school fund of the state the sum of three hundred dollars, and this amount, together with gifts, grants and bequests, shall constitute a separate fund to be known as The Teachers' Annuity Fund, and shall be invested in the same manner as other school funds. The interest earnings on The Teachers' Annuity Fund shall be divided equally among the annuitants in annual or quarterly payments as the state superintendent of public instruction may direct and shall be in addition to the annuity paid by the state; provided, however, that the annual interest distribution to annuitants shall not exceed the sum of three hundred dollars to each annuitant. The excess interest earnings shall be applied upon the annuity paid by the state.

The three hundred dollar payment by the teacher into The Teachers' Annuity Fund may be in a lump sum or it may be deducted from the annuity.

. . . . . .

Sec. 10. Retirements may be made any time after the passage of this act, but no retirement shall take effect before September 1, 1918.

Sec. 11. Gifts, grants and bequests may be made to The Teachers' Annuity Fund, and the form of such gift, grant or bequest shall be: To the Permanent School Fund of the State of Iowa for the Benefit of The Teachers' Annuity Fund.

Sec. 12. The annuity granted herein shall not be assigned, and shall be exempt from garnishment, attachment or execution.

This bill ought to be passed by Iowa and copied by other states. Both the insurance feature and the annuity feature are sound in principle. A state ought to provide for aged or incapacitated employees after a reasonable length of service in exactly the same way that a railroad company or a manufacturing concern ought to make such provisions. Retirement after twelve years of service is distinctly protected against abuses which might become serious, by the provision specifying mental or physical disability acquired during a reasonable length of service. Thoroughly incompetent teachers and teachers who enter the occupation as a makeshift are likely to be eliminated before they have taught twelve years. The enactment of such a bill would protect the schools against incompetents and would go far toward relieving hard-working teachers from the fear of unprovided old age. The annuity principle, moreover, ought to satisfy their self-respect. This feature is distinctly better than annual deductions from a teacher's salary during his term of service.

Digitized by Google

Society of College Teachers of Education, February 26 and 27, 1917, Kansas City, Missouri.

The Society of College Teachers of Education met in the St. Francis Room of the Baltimore Hotel on Monday and Tuesday according to printed program. All members appearing on the program were present with the exception of William Russell, whose discussion was omitted. The attendance during Monday's session averaged around three hundred. The attendance for committee reports and business Tuesday forenoon averaged about one hundred and fifty.

BUSINESS SESSION

The co-operation of Mr. George Melcher in making arrangements for the meeting of the Society of College Teachers of Education was brought to the attention of the Society by the secretary. On motion, the thanks of the Society were extended to Mr. Melcher.

The report by Chairman Thompson on "Organization of Placing Committees" was approved in general, and the committee was authorized to select a co-operating member in each state with whom to work to complete the organization and to secure uniform blanks and procedure throughout the country.

The report by Chairman Rall on "Reorganization" was approved in general and referred to the Society for final vote at its meeting next year, in accordance with the constitution. The desire of members further to consider Mr. Rall's report led to a motion that the different items be now considered and approved. Accordingly the preamble, the article making provision for membership for efficiency men, the item permitting members to continue after they enter other lines of work, and the fixing of the executive committee membership at eight were all read and approved by the Society, with the understanding that this approval is not binding upon the Society.

The question of admitting teachers in education from four-year normal schools to membership was referred to a special committee with instructions to report next year. Discussion from the floor indicated a sentiment in favor of admitting to membership the strong men in education from normal-school faculties.

The Auditing Committee, through Carter Alexander, chairman, and one other member reported to the Society that the accounts were found correct, and accordingly approved.

The report of the secretary-treasurer shows receipts and expenditures as follows:

Digitized by Google

RECEIPTS

Balance forwarded from 1916	$186.67	
Membership dues paid at Detroit meeting and up to April 20 following	39.00	
Membership dues received up to December 23	61.00	
Membership dues received up to February 24	153.00	
Total	$439.67	$439.67

EXPENDITURES

Postals about Kansas City hotel arrangement May 1, 1916; paid by check	2.50	
Envelopes from Carpenter Paper Co. (500) to send out notices of dues, December 8	1.40	
Stamps used in collecting dues	8.00	
February 6, 400 sixteen-page folders, program, and membership list; paid by check	20.50	
February 6, 500 envelopes, 7×10½, Carpenter Paper Co.	1.58	
February 19, 600 one-cent stamps, 470 two-cent stamps, used in sending out separates and programs	15.40	
For proofreading and stenographic work	10.00	
The Torch Press, printing of 500 separates	107.50	
Total	$166.88	$166.88
Balance on hand		$272.79

The Nominating Committee reported the following officers for the coming year: L. D. Coffman, president; G. M. Wilson, secretary-treasurer; F. P. Graves, member of the Executive Committee to replace W. A. Jessup retiring. The report was accepted, and the election was declared unanimous.

Edward F. Buchner brought to the attention of the Society the advantages of affiliating with Section L of the American Association for the Advancement of Science. After discussion the following resolution was presented and passed unanimously:

Resolved, That the Society of College Teachers of Education will welcome the opportunity of enjoying the benefits of affiliation with the American Association for the Advancement of Science, provided this privilege could be extended to all persons who are members of the Society during the year 1917.

The excellent program, the large attendance, the luncheon features, gave to the Society's meetings an appearance of solidarity and power which was the subject of most favorable comment by the older members who can remember the humble beginnings of the Society. The change has been rapid. Departments of education and the professional training of teachers are now everywhere accepted and approved.

(*Signed*) G. M. WILSON, *Secretary*

Digitized by Google

CURRENT EDUCATIONAL WRITINGS

I. RECENT PUBLICATIONS IN THE FIELD OF SECONDARY-SCHOOL ADMINISTRATION

FRANKLIN W. JOHNSON
Principal of the University of Chicago High School

At any period in the history of education those who have been responsible for the work of the schools, teachers, and administrators alike, have found justification for current practices in sanctions which have become outgrown. In methods and subject-matter of instruction, as well as in forms of school organization, custom has been largely the determining factor. The aristocratic tendencies in European secondary education controlled the early secondary schools in this country and gradually became dominant in the academy and later in the high school. The rapid expansion of our population and the development of new social and industrial classes with new trades and professions have created for the schools the imperative need for radical readjustments to meet the changed social conditions. That we are undertaking to meet the situation is seen in new types of organization like the junior high school and the junior college, in industrial education either in separate schools or as a part of the work of the cosmopolitan high school, in the widespread interest in more efficient methods of instruction, particularly in what is called supervised study, and in the introduction of new material of instruction or the radical reorganization of the older material in such new forms as general science, community civics, and combined or correlated mathematics.

In the present unsettled condition there is extreme danger that those who are in charge of the schools will not have clear ideas as to what it is all about and that the immediate result will be a state of confusion which will give considerable comfort to the conservatives, who may be counted on to make the most of their opportunities. What we need at this juncture is a clear statement of the aims that underlie the changes that are taking place. Dr. Snedden's *Problems of Secondary Education*[1] is a forceful and comprehensive statement of these aims. Not the least interesting part of this book is the introduction by Mr. Cubberley, editor of the "Riverside Textbooks in Education," a series of which this is the last book published.

For the sake of securing a more direct and more personal approach to the problems under consideration the author has arranged his material in the form

[1] David Snedden, *Problems of Secondary Education*. (Riverside Textbooks in Education.) Boston: Houghton Mifflin Co. Pp. 333. $1.50.

Digitized by Google

of letters addressed to the various types of teachers or administrators directly or indirectly associated with the work of secondary education. These letters are addressed to a university president, a college professor of education, and the chairman of a committee on college admissions, to a superintendent of schools, an assistant superintendent in charge of vocational education, and to the principal of each of the following types of schools: a general high school, an industrial school, an agricultural school, a commercial high school; to a conference of secondary-school teachers; to a teacher of each of the following subjects—Latin, modern languages, English, history, social science, physics and chemistry, biology, general science, music and art, home economics, physical training; to a committee appointed to investigate and report on current criticisms of high-school mathematics; and to a superintendent as chairman of a committee to consider the matter of developing the junior high school.

In these twenty-five letters the author scrutinizes the current methods and material employed in our schools against the background of their social usefulness for men and women of the present time. Social usefulness as considered by the author represents no narrow utilitarian aim. It includes, not merely the "ability to do, to execute, to construct," but also the "ability to discriminate, to choose, to appreciate, and, in the broad sense, to utilize."

In general, the author does not undertake to state dogmatically the methods by which the aims are to be secured in the wide field which his letters cover; instead he contents himself with raising vigorous and stimulating questions, the solution of which he leaves to those who are assumed to be specialists in their various fields, pointing out the direction in which future progress must probably be made. And yet there are numerous definite suggestions for improvement. For example, in his letter to a teacher of English, after pointing out the fact that the twelve to fifteen million dollars spent annually in teaching English in our high schools places upon English teachers the necessity of demonstrating "to a greater extent than seems now practicable, the effectiveness of the means and methods which they employ," he suggests that literature and expression should be taught separately and by different teachers. In addition to the teaching of oral and written expression, the latter of which has received the lion's share of attention, he suggests that training be given in the technique of effectively listening to, or hearing, English as spoken or read, in silent reading, and in oral reading.

The letter to a teacher of social science is peculiarly interesting and stimulating. He suggests for the second high-school year a course in social science, including history, divided under these heads: "(*a*) project problems, in which the learner will be expected to have experience in active participation, which he can describe and interpret; (*b*) observation problems, where the learner can have facilities for concrete observation, and where, as a result of such observation coupled with reading, he will describe and interpret for the class; and (*c*) reading problems and studies, in which the learner will have to obtain most of his information from reading and analogous sources, interpret-

Digitized by Google

ing this as best he can for the class." Definite lists of type problems falling under each head are given which leave no doubt in the reader's mind as to the superiority of such a course, from the point of view of the interest and social usefulness to the pupil, over the formal courses in history which still prevail in our schools.

Physical training in high school has included little except training teams consisting of a few already well-developed boys for athletic contests with similar teams from other schools. The letter to a teacher of physical education proposes "instruction in hygiene and systematic oversight of physical development and training as a condition of living and working under modern conditions." If the school is consistent with its aim to make the pupils socially useful and efficient, our conception of physical training must be greatly expanded. This letter contains an outline of fifteen recommendations made by the author to the Massachusetts Commission on Military Training and Reserve which are of timely interest in connection with the present discussion of military training in the high school.

Mr. Snedden's book is a most stimulating contribution to educational literature. It is to be hoped that many of his suggestions will be put to the test of experience by teachers and administrative officers in our schools.

Three persons have to do with the administration of a public school—the classroom teacher, the principal, and the superintendent—each of whom contributes his share to the common enterprise. Under the head of classroom management there is an abundant literature dealing with the work of the classroom teacher. Ellwood P. Cubberley's *Public School Administration*[1] deals with the work of the superintendent. A later volume of the series on the *Organization and Administration of the School* will deal with the functions of the principal. It is proposed to add still another volume on the *Supervision of Instruction*. If the present volume furnishes basis for judgment these books will furnish quite the most complete and adequate treatment of the problems of school administration available for school officers.

The book treats the subject under three general heads: outlines of state educational organization; the city school district and its problems; and city administrative experience applied. Under the first of these heads the author discusses the evolution of the various existing forms of organization in six chapters: origin and development of schools; state authorization and control; state organization; county organization; town, township, and district organization; the city school district.

Part II, dealing with the practical problems of city school administration, is likely to prove most interesting and valuable to the superintendent. In this the author treats in a concrete and vigorous manner the functions of the

[1] Ellwood P. Cubberley, *Public School Administration*. (Riverside Textbooks on Education.) Boston: Houghton Mifflin Co. Pp. 479. $1.75.

Digitized by Google

superintendent in relation to the various parts of the school organization: the school board; the teaching corps; the departments in charge of health, attendance, and business.

To the young man who aspires to the superintendency the two chapters on the superintendent and his work will be found most interesting, and, if the suggestions of the author are followed, will prove a valuable aid to success. After discussing the training necessary for the position, he gives the following as among the personal qualities necessary for a superintendent:

> While good training and experience are of fundamental importance to the man who wishes to prepare for educational leadership, certain personal qualities must be added to both if any large success is to be achieved. The man who would be a superintendent of schools—the educational leader of a city—must be clean, both in person and mind; he must be temperate, both in speech and act; he must be honest and square, and able to look men straight in the eye; and he must be possessed of a high sense of personal honor. He needs a good time-sense to enable him to save time and to transact business with dispatch, and a good sense of proportion to enable him to see things in their proper place and relationship. He must have the manners and courtesy of a gentleman, without being flabby or weak. He must not be affected by a desire to stand in the community limelight, or to talk unnecessarily about his own accomplishments. He must avoid oracularism, the solemnity and dignity of an owl, and the not uncommon tendency to lay down the law. A good sense of humor will be found a means of saving grace here, and will many times keep him from taking himself too seriously.

The work of the superintendent is discussed under three heads: as an organizer, as an executive, and as a supervisor; and the danger of overemphasizing any one of these to the neglect of the others is pointed out. The importance of the use of tests of the results of school work is emphasized in the training of the modern superintendent.

The chapter on "Functions of School Boards" might be commended to the careful reading of members of legislatures and city governments who cannot see to what extent the schools are rendered inefficient by the meddling control of large school boards. He says:

> A city school board composed of a machinist, a retired gentleman, a grocer, a shoe clerk, a real estate agent, a druggist, a lumber-yard foreman, a hotel-keeper, an old and busy lawyer, a bookkeeper, a young lawyer without much business, and a banker might be considered to be a board of the better type. . . . . If, in place of five of the better members of the board described above, we substitute a teamster, a blacksmith, a saloon-keeper, a young politician with little or no visible means of support, and a crank with an educational hobby, as often happens as a result of city elections or appointments by mayors, we get a combination which is likely to do much to destroy the efficiency of a school system by turning it into a city patronage department and by attempting to perform almost every technical and professional function which a school board should leave to experts to perform.

Having considered in detail the principles underlying the organization and administration of city school systems, in Part III the author applies the results

Digitized by Google

of the best administrative experience to the problems involved in the organization and administration of public education in the county and the state. To make adequate provision for rural and village education he recommends the "subordination of the district system and probably, in part, the township system also; the erection of the county as the unit of school organization and administration, cities under city superintendents of schools being exempted from the county organization; and the complete elimination of party politics from the schools."

In his introduction the author expressed his purpose "to avoid the production of a book of mere facts and figures" and also to avoid the defects of most writers on administration who present such a nice balancing of arguments as to make their books practically colorless. In both respects he has succeeded notably. Facts and figures there are in abundance, but they are always used to support the conclusions which are stated with such definiteness as to leave no one in doubt that they represent the author's genuine convictions. In addition to the interest in the subject-matter itself, the clear and often graceful style in which it is expressed adds greatly to the pleasure of the reader.

It is no longer necessary to convince school men that there is much waste in our secondary education. We are familiar with the fact that at the age at which our high-school graduates enter college the German boy has completed the equivalent of the two years of our junior college work. The six-six plan attempts to remedy this loss on the side of organization. Supervised study attempts to seek a remedy on the side of instruction. School administrators who are interested in securing economy—and who are not?—will profit by reading Mr. Russell's *Economy in Secondary Education*.[1] Basing his discussion on analysis of the German and French systems, the author proposes as means for securing economy a longer school day and year, a clearer articulation of the elementary and high schools, the adoption of some phase of the French cycle system by which those who drop out of school may have introduction to the essential elements, the elimination of useless subject-matter and improved methods of instruction.

One of the essential characteristics of a democratic form of society is the opportunity and incentive which it affords for the fullest development of the individual in the direction of his natural interests and abilities. Our schools, one of whose important aims we have claimed to be the preparation for effective citizenship, have been peculiarly inconsistent in that, as regards both organization and instruction, they have treated pupils as if they were all alike. The investigations of Thorndike and others have shown that one of the most

[1] William F. Russell, *Economy in Secondary Education*. (Riverside Educational Monographs.) Boston: Houghton Mifflin Co. Pp. 74. $0.35.

Digitized by Google

impressive facts about the groups of children in our classrooms is the wide differences in natural interests and abilities which they present. The two topics which have been most widely discussed in our educational journals of late have had their origin in this doctrine of individual differences. The junior high school attempts, among other things, to deal with the problem on the side of organization, supervised study on the side of classroom method.

Among the abundant material on the junior high school may be mentioned an article on its administration by Charles H. Johnston[1] in *Educational Administration and Supervision*, which contains a valuable bibliography of discussions and reports. Another paper by the same author is found in the *Journal of the National Education Association*.[2] Thomas H. Briggs of Teachers College, New York, has discussed the subject in his chapters on Secondary Education in the annual reports of the Commissioner of Education for the last three years. The forthcoming bulletin on the junior high school which Mr. Briggs is preparing for the General Education Board is awaited with interest. Bulletin No. 1, Vol. XI,[3] published by Middlebury College, Vermont, is an outline of a course on the junior high school given in that institution by Mr. Frank E. Howard, containing a discussion of the defects of our present system, the advantages of the junior high school, notes on the course of study, and a selected bibliography. Perhaps the best available statement of the courses offered in the junior high school is that contained in the *Hand Book of the Detroit Junior High Schools*.[4]

One who examines the growing mass of material on this subject can have no doubt of the widespread interest in this new form of organization which is rapidly being adopted in every part of the country; nor can one avoid a feeling of apprehension that the movement in the direction of changes in administrative form will outrun the changes in organization of materials and methods of instruction which are essential to the ultimate success of the junior high school.

The selective function of the high school by which the pupil has been enabled to discover the lines of his greatest interest has been long emphasized in educational discussion. The fallacy has been that a large number of pupils have never entered the high school at all, and that for those who have entered there has been too little time to secure mastery of the subjects which have appealed to their special interests. If the program of studies in the junior high school is made broad enough to perform this selective function two years earlier, it will be possible to arrange sequences in the different subjects long

[1] Charles Hughes Johnston, "Junior High School Administration," *Educational Administration and Supervision*, February, 1916, pp. 71–86.

[2] Charles Hughes Johnston, "The Junior High School," *Journal of the National Education Association*, I, 145–51.

[3] Frank E. Howard, "The Junior High School," *Middlebury College Bulletin*, Vol. XI, No. I. Pp. 43.

[4] *Hand Book of the Detroit Junior High Schools*, 1916–17.

Digitized by Google

enough to give the pupils such mastery as will greatly increase their efficiency either in higher institutions of learning or in their life-occupations.

The freedom from the formal requirements of time and textbook which the unit definition has imposed upon the four-year high school will offer wider opportunity for the much needed attention to the study habits of pupils. This movement already well under way in the existing high school, if extended to the seventh and eighth grades, should go a long way in the elimination of the waste which has marked the period of secondary education. Interest in the improvement of the methods of study of high-school pupils has been rapidly increasing and has resulted in many experiments generally spoken of as supervised study. Mr. Hall-Quest has performed a considerable and laborious service in collecting the scattered material in the journals and in securing detailed reports of the practices in many schools about which no published material was available. This material he has published in his book *Supervised Study*,[1] from which the principal and classroom teacher may secure information as to the various methods of organization and classroom procedure employed.

In teaching effective methods of study there is great need of explicit directions which can be given concrete application in school situations. *How to Study Effectively* by Guy M. Whipple[2] presents such directions in a little book which has been found valuable for the purpose. Another book,[3] which was prepared by Mr. Harry D. Kitson for use in classes of college Freshmen, is worthy of mention. Principal Sandwick's book,[4] published before both of these, is designed to meet the same purpose. Several concise statements of directions for study have been prepared for the use of pupils. Among these are the *Study Helps*[5] which have been used with good results in the High School of the University of Chicago. These are prepared with gummed backs and are pasted by the pupil inside the cover of each textbook which he uses, where they are easily available for reference whenever occasion demands.

II. BOOK REVIEWS

Applied Latin. By W. H. FREEMAN. Milton, Pa.: Weidenhamer & Co.

In the March issue of the *School Review* there appears a lengthy examination of *Applied Latin* containing hardly a single commendatory reference. It has occurred to us that the reviewer did not keep carefully before his mind that

[1] A. L. Hall-Quest, *Supervised Study*. New York: Macmillan. Pp. 443. $1.25.

[2] Guy Montrose Whipple, *How to Study Effectively*. Bloomington, Ind.: Public School Publishing Co. Pp. 44. $0.50.

[3] Harry D. Kitson, *How to Use Your Mind*. New York: J. B. Lippincott & Co. Pp. 215. $1.00.

[4] Richard L. Sandwick, *How to Study and What to Study*. Boston: D. C. Heath & Co. Pp. 170. $0.60.

[5] *Study Helps*. Prepared by teachers in the University High School. Chicago: The University of Chicago Press. $1.00 per hundred.

Digitized by Google

the ethics of reviewing demand that a reviewer should point out, not only the defects, but also the good points of the work. It has appeared to us quite unprofessional, then, that the reviewer should have taken so much space to call attention to some picayune details of mechanical construction, to render certain statements ridiculous by separating them from their context, and to give evidence that he has not made a serious attempt to find out first the aims which prompted the book.

It is true, as the reviewer says—unfortunately too true for the good of the subject of Latin—that there has been almost no change in the methods of Latin instruction for beginners in the last thirty-one years. Practically every author has slavishly followed the outlines of the Collar and Daniell *Beginner's Latin Book*, though in late years there has been a marked attempt to wander away even from some of the chief merits of that work. For instance, its wide vocabulary, which really gave to the student the power to translate Latin works other than the *Commentaries* of Caesar, has been pared down so that little now remains. Consequently today when a Latin teacher is asked what is the purpose, aim, or method of his teaching, he is forced to say that he has none other than getting his students ready to read Caesar, then Cicero, then Virgil, for what—well just to pass the college-entrance examinations. This is an unfortunate situation. Such teaching can only be meager, jejune, and for the majority of students unattractive, even repellent. The continuing of the subject of Latin in the high schools of the country, merely that a very few may measure up to certain fixed requirements, without doubt has been responsible for the great hostility that today attends the subject. If the subject of Latin is to be retained in the curriculum, it must be made to offer to the vast numbers of students who do not intend to go to the higher institutions some actual reason for its existence. It is therefore rather unfair and short-sighted for a reviewer to attack a book because it aims to make Latin a helpful subject to the 95 per cent of pupils who expect to find something of value in everything they study. No book, we take it, should be condemned at this time which aims to prove to our pupils that one subject, at least, has actual and tangible merits. It is unfair also to the great subject of Latin to allow it to be attacked continually on the grounds of lifelessness and uselessness to this generation. Your reviewer should carefully read the introduction to this book again and note that it has been written especially to bring out the value of Latin to those pupils who do not intend to use it as a means for passing into college. Some of its novel features will appear to him in a different light, and he will not belittle the book because it is not a slavish imitation of its predecessors.

In such a work as *Applied Latin*, which aims to awaken the student to the realization that Latin is the best handmaid to the study of English and is indispensable to an easy understanding of much of the terminology of the other subjects of the high-school curriculum, that prime emphasis should not be given, as in other books, to the translation of Latin sentences. Other things must naturally precede this or the book will fail to reach the accomplishment of

Digitized by Google

its aims. The study of English words, their spelling, their derivation from Latin, English grammar, Latin vocabulary (selected for its importance in furnishing root words in English), Latin forms and rules of syntax, drill exercises, etc., must precede translation from Latin into English or from English into Latin. If the book aims to present the facts of English grammar side by side with those of Latin grammar (a scheme which reduces the English teacher's difficulties in teaching formal English grammar), it is greatly to the credit of *Applied Latin* that the different parts of speech are handled in a consecutive manner rather than in the jumbled fashion of the older-style books. In such a book it is hardly discreditable that the first exercises in the translation of continuous prose should not be on the first pages of the text. Surely every teacher of Latin realizes that one of the main defects of present instruction in Latin is that the student is asked to read sentences selected from the scrupulously exact and usually uninteresting narrative of Caesar before he has learned to read simple sentences, the material of which demands no extended knowledge of the facts of a distant civilization.

The sentences which your reviewer has dubbed a substitute for translation are not and never were intended to be such a substitute. They occur on the very first page of the text and merely embody one method of acquiring new Latin words. No case relations are asked of the pupil because up to this point no reference at all has been made to the fact that Latin words have case relations.

It is difficult for us to understand why so much space is given to criticizing our use of the word "translate." We should be glad to have, and numerous other teachers would welcome, some substitute for the word "translate" which would clearly convey to the mind of the young student the idea involved, even when its use is somewhat extended as your reviewer has pointed out. Some of the words proposed, as "sense" or "interpret," would mean practically nothing to the pupils for whom this book is intended.

The extent to which your reviewer permits himself to go is to be seen in his unwarranted suggestion that the author of *Applied Latin* should have adopted the English pronunciation of Latin. It is absurd for anyone to make such a suggestion at a time when there is hardly anyone who would even think of Latin in terms of English pronunciation. Certainly no teacher of Latin would contemplate such a course for a moment. We take it that such a suggestion is eminently unfair.

It would be a matter of too much space to dwell upon the excerpts from the book that appear in the review. Surely it is unfortunate that the entire content is not added in each case. The impression is altogether antagonistic to the book and seems to indicate that the reviewer went pretty far afield to discover points for criticism. It is true that in the current beginners' books nothing is done in a concrete way to elucidate the difficulties in the rendering of the subjunctive mood. Now that something has been attempted in this line it is rebuked, apparently because it has not been done before.

Digitized by Google

We should like to call attention to the fact that the book does not present a monotonous typography as stated. The reason for this criticism rests, not on the type, which presents plenty of variety, but on the fact that the book is not stuffed full of pictures and cuts in a desperate attempt to lure on the hesitating pupil. Other means are employed in this work to convince such a pupil that every hour spent with this book will more than repay his effort. The lack of constantly recurring breaks in the text to indicate the divisions of the work has behind it an endeavor to permit the teacher himself to set the extent of his assignments and to prevent pupils from deciding how much they will study, for it is a well-known fact that the student will stop automatically at the break between the lessons if such a break is indicated. We fail to see, too, why the digressions on Roman customs and manners should not meet with the approval of any reviewer. In them is material which the pupil should get in his course, but which the ordinary teacher rarely presents.

W. H. FREEMAN

TRENTON, N.J.

Critical Realism, A Study of the Nature and Conditions of Knowledge. By ROY WOOD SELLARS, PH.D., Assistant Professor of Philosophy in the University of Michigan. Chicago: Rand McNally & Co., 1916.

Upon thoughtful men philosophy has a claim of a nature which no other discipline possesses. Every normal human being from the savage to the genius has a metaphysical system, incoherent and imperfectly formulated though it may be. He has, for example, certain notions about the external world, the relation between this world and his own conscious life, and much else. He is therefore in an utterly different relation to this subject from what he is to physics or geology. The demand which it makes upon his attention is thus the demand that his thoughts concerning these matters shall be guided by the best thought of the race.

Professor Sellars, in his *Critical Realism*, has proceeded throughout upon the foregoing supposition. He shows first what the fundamental features of popular metaphysics are, and he likewise shows their untenability. It is physics, physiology, and psychology that have supplied the demonstration of this fact by showing that what appears to be an immediate vision of the external world is nothing of the kind; that in reality the external world is known to us only in an indirect way, and that every picture we form of it is modified by purely subjective factors, the traces of past experience. On the ruins of popular metaphysics men of science have essayed to build up systems of their own; those of Descartes and Locke were but the forerunners of many others. In so far as these thinkers assume a world really possessed of the "primary qualities of matter" as physics conceives matter for its own purposes, they can also be shown to be building without foundations. As a result we seem to be left with a universe consisting of finite centers of consciousness, or, as in the

Digitized by Google

Berkeleyian scheme, of finite minds plus the infinite consciousness of God. That the very nature of knowledge compels us to accept a world which is thus a system of minds and nothing more is vigorously asserted by a large number of contemporary students of metaphysics, though their songs are sung in many keys often far from accordant. The futility of these positions is exhibited by Professor Sellars by means of an analysis of the knowing process, in what is one of the best parts of his book. In particular they are shown to break down when tested by our knowledge of other minds than our own—a subject upon which most contemporary epistemologists are strangely reticent. With these illusory barriers broken down the question whether there is anything in the universe besides centers of consciousness becomes simply a matter of evidence. Professor Sellars holds—correctly, as I believe—that this evidence can be produced.

It runs along a number of convergent lines, but all turns in the last resort upon the recognition that our experience in sense perception is determined by other than mental factors, by factors which are not discoverable in one's own mind or in the mind of others. The conclusion that emerges is the existence of an "external world," but one of which we have no immediate vision, one of whose qualities and relationships we can know only in a very indirect and incomplete manner through the effects it produces in consciousness. The position thus reached is Realism, but not the naïve Realism of popular thought and some contemporary philosophers, but a Realism that has gone through the fires of criticism directed at these naïve conceptions by Berkeley, Hume, and Kant, and their followers.

The ways in which contemporary Idealists try to conceal from their eyes this determination of mental happenings by conditions which cannot be found in finite minds at least, Professor Sellars describes at some length. But he has not done it with sufficient completeness. He has not shown, as he might have shown, that the speech of the Idealist always betrayeth him; that, with all his criticism of, or contempt for, the category of causation as an instrument of metaphysical investigation, he will invariably be found to be accepting beliefs which have no justification whatever except the principle of causation; that the only question with any metaphysician is not whether he will use the principle, but whether he will do so openly and consistently and to the end, or whether he will rather sneak it in when his reader isn't looking and use it only when he finds it convenient. Professor Sellars also fails to deal with sufficient thoroughness with the difficulties which undoubtedly attend the use of the principle—difficulties which, if they do not justify, to a considerable extent explain this playing fast and loose with this fundamental conception. At these points the work might have been stronger. Nevertheless it is an admirable presentation, as a whole, of the data upon which a critical theory of Realism must rest. In particular, it is a welcome addition to the literature of the knowing process. It may thus be commended warmly to those who have passed beyond the stage of naïve Realism and still, whether through the influence of science or otherwise, find themselves compelled to look with suspicion upon the

Digitized by Google

pretensions of the various forms of Idealism. It may be commended with equal warmth to those who are interested in certain phases of the problem of knowledge which are more or less completely ignored in most treatises on psychology and are dealt with in an unsatisfactory manner in most contemporary works on logic and epistemology.

FRANK CHAPMAN SHARP

UNIVERSITY OF WISCONSIN

Measurements of Some Achievements in Arithmetic. By CLIFFORD WOODY. New York: Teachers' College, Columbia University, 1916. Pp. 63.

This monograph presents a series of scales which are adapted to the measurement of the fundamental operations in arithmetic. In the derivation of these scales Mr. Woody has in a general way followed the methods which Buckingham and Trabue used respectively with spelling and completion tests. Readers who are familiar with the statistical nomenclature of scale formation will discover much of interest throughout the monograph. Other readers will derive their chief profit from a consideration of Part I, pp. 1–24, in which the author describes the arithmetic scales, gives directions for their uses, and discusses their values and limitations. Part II, pp. 25–63, presents a somewhat detailed account of the derivation of the scale.

The author has arranged two sets of scales: series A to be given when there is an abundance of time for testing, and series B to be used when the time is more limited. Each series consists of a separate scale for addition, subtraction, multiplication, and division. Each scale in series A is comprised of thirty-five or more problems arranged in an order which proceeds from very simple problems to those of successively increasing difficulty. Each pupil solves as many problems as he can in twenty minutes. The author has established comparative values for each problem and has elaborated several tables for use in estimating class averages. He has also presented tentative standards of achievement in each fundamental process for all of the grades from II to VIII.

The Woody scales will undoubtedly prove to be a valuable addition to the rapidly increasing number of instruments which are adapted to the measurement of achievement in school subjects. Just what proportion of total or essential arithmetical ability is measured by the Woody scales remains to be seen. Mr. Woody acknowledges a number of important assumptions which underlie the derivation of the scales, and he has been arbitrary repeatedly (possibly necessarily) in the selection of methods for computing problem values.

It will be interesting to compare the abilities of specific classes which have been tested by the Woody scales with their abilities as determined by the Courtis tests. If each series of tests measures general ability in the fundamental arithmetical processes, the averages maintained by any class, if large

Digitized by Google

enough, should be approximately proportionate to the respective standards which have been set by Woody and Courtis for the given school grade. If, on the contrary, large classes tend to differ with reference to the respective standards set, it will be evident that one, or possibly each of the Woody and Courtis tests, measures particular rather than general ability in the fundamentals.

FRED C. AYER

UNIVERSITY OF IOWA

III. PUBLICATIONS RECEIVED

(Detailed discussions of some of the following books will appear later.)

CLOPPER, EDWARD N. *Farmwork and Schools in Kentucky.* Photos by LEWIS W. HINE. Published by National Child Labor Committee, New York City, March, 1917. Pamphlet 274. Paper. Pp. 30.

A study of farmwork in relation to schools and community life. Farmwork interferes with the education of rural children more than any other factor. Compulsory attendance law is ignored with disastrous results to child, school, and community.

Courses of Study in Hygiene and Sanitation. Nebraska Educational Bulletin. Special edition. Vol. II, No. 3, December, 1916. Published quarterly by the State Department of Public Instruction, Lincoln, Neb. Paper. Pp. 44.

Keeping the Children Well. Medical Inspection; School Nurses; the Open-Air School; Open-Air Rooms. Monograph No. 4, Series of 1916–17. Ordered published by the Board of Education, City of Minneapolis, December, 1916. Pp. 41.

MELVILLE, NORBERT J. *Testing Juvenile Mentality by the Binet-Simon Scale with the Original Questions, Pictures, and Drawings. A Uniform Procedure and Analysis.* With an introduction by WILLIAM HEALY. Philadelphia: J. B. Lippincott Co., 1917. Cloth. 12mo, pp. xi+140. $2.00.

Designed to aid in the training and guidance of school officials and others who, though not specialists, may be called upon to give the first decisions in case of suspected mental deficiency.

STRONG, EDWARD K., JR. *Effects of Hookworm Disease on the Mental and Physical Development of Children.* New York: The Rockefeller Foundation. International Health Commission. Publication No. 3, 1916. Pp. 121.

WILSON, MATTHEW HALE. *An Inductive Study of Standards of Right.* Boston: Richard G. Badger, 1916. Cloth. Pp. 321. $1.50.

A detailed view of the main activities of society with application of the moral principles which guide to correct conduct. Social, ethical, and vocational guidance.

HIGH-SCHOOL TEXTBOOKS

BURKHARD, OSCAR (Editor). *German Poems for Memorizing, with the Music to Some of the Poems.* New York: Henry Holt & Co., 1907, 1917. Pp. viii+129.

Digitized by Google

ESPINOSA, AURELIO M. *Elementary Spanish Reader.* Chicago: Benjamin H. Sanborn & Co., 1916. Cloth. Pp. ix+208. $0.90.

Simple, idiomatic, practical readings to accompany the introductory lessons in Spanish.

GRIFFITH, SAMUEL IRA. *Carpentry.* Peoria: The Manual Arts Press, 1916. Illustrated. 12mo, pp. 188. $1.00.

The essentials of carpentry with a chapter on building estimates. For vocational and trade-school students and journeymen.

HART and PERRY (Collectors). *Representative Short Stories.* New York: Macmillan, 1917. Pp. xxi+304. $0.25.

HESSLER, JOHN C. *The First Year of Science.* Chicago: Benjamin H. Sanborn & Co., 1916. Cloth. Pp. xiii+484. Laboratory Exercises, pp. ix+118. With Manual, pp. 626, $1.45; without Manual, pp. 498, $1.25; Manual, pp. 128. $0.65.

Physics and chemistry with no formulae, symbols, or equations and only a few calculations and those very simple. Other chapters are entitled "Water, Heat, Air, and Light in the House," "The Weather," "Plants," "Animals," "The Human Body and Its Food," "Sanitation," etc.

HUEBSCH, RUDOLPH W., and SMITH, RAYMOND F. *Progressive Lessons in German.* Revised Part I. Boston: D. C. Heath & Co., 1917. Cloth. 16mo, pp. ix+165.

Embodies some unique features, the outcome of classroom experience. For junior high school.

LEE, ARTHUR. *Lessons in English.* Based on the texts by Reed and Kellogg. Book II. New York: Charles E. Merrill Co., 1917. Cloth. 12mo, pp. 320.

Part I treats of the sentence and parts of speech. Part II is a detailed discussion of the elements of English composition.

LUQUIENS, FREDERICK B. *Elementary Spanish-American Reader.* New York: Macmillan, 1917. Cloth. Illustrated. 12mo, pp. xi+224. $0.90.

Interesting stories and descriptive material in Spanish for students commencing the study of the language. Contains exhaustive notes and complete vocabulary.

MORRIS, JOHN E. *Europe in the Nineteenth Century (1815–1878).* Cambridge: University Press, 1916. 12mo, pp. 278. 2*s.* 6*d.*

SCHERER, PETER. *Deutsches Lesebuch mit Sprach- und Sprachübungen.* New York: Henry Holt & Co., 1917. Pp. v+132.

SHEAFFER, WM. A. *Household Accounting and Economics.* New York: Macmillan, 1917. 12mo, pp. xi+161. $0.65.

Business methods applied in home management. For girls and women taking household economics courses.

SPRAGGE, W. HORTON and SLOMAN, ARTHUR. *Latin Prose for Middle Forms.* Cambridge: University Press, 1916. Pp. viii+147+16. 12mo, 3*s.*

To assist early facility in continuous Latin prose.

Digitized by Google

STONE, JOHN C. and MILLIS, JAMES F. *Plane and Solid Geometry.* Chicago: Benjamin H. Sanborn & Co., 1916. Cloth. Pp. x+448.

A revision of the text published in 1910 by the same authors preserving the principal features of the older book, but purporting to be more simple, practical, and teachable.

TALBOT, L. RAYMOND. *French Composition.* Chicago: Benjamin H. Sanborn & Co., 1915. Cloth. Pp. x+145.

Exercises in English to be translated into French. English-French vocabulary.

THURSTONE, LOUIS L. *Freehand Lettering.* Chicago: B. D. Berry Co., 1915. Paper. 4mo, 20 plates.

Seventeen plates with instructions for the student.

WHITNEY, MARIAN P. and STROEBE, LILIAN L. *A Brief Course in German.* New York: Henry Holt & Co. Cloth. Pp. ix+199.

Based on use of the verb and the phrase according to the direct method. Has demonstrated its worth in Vassar and several high schools.

JUNIOR-COLLEGE TEXTBOOKS

NORTHRUP, EDWIN F. *Laws of Physical Science.* Philadelphia: J. B. Lippincott Co., 1917. Cloth. 12mo, pp. vii+210. $2.00.

A reference book of the general propositions and laws of physical science.

ROWE, HENRY K. *Society, Its Origin and Development.* New York: Scribner, 1916. Cloth. Pp. vii+378.

Social science seen in its practical aspects.

VENABLE, FRANCIS P. *A Brief Account of Radio-Activity.* Boston: D. C. Heath & Co., 1917. Cloth. 16mo, pp. vi+54.

WEBSTER and NEILSON (Translators and Editors). *Sir Gawain and the Green Knight, Piers the Ploughman.* Boston: Houghton Mifflin Co. Cloth. Pp. xi+60. $0.60.

PUBLICATIONS OF UNITED STATES BUREAU OF EDUCATION

ANDREWS, BENJ. F. (Compiler). *Registration and Student Records for Smaller Colleges.* Department of the Interior, Bureau of Education. Bulletin, 1916, No. 33. Washington: Government Printing Office, 1916. Pp. 67.

CAPEN, SAMUEL P. *Recent Movements in College and University Administration.* Department of the Interior, Bureau of Education, Bulletin, 1916, No. 46. Washington: Government Printing Office, 1917. Pp. 60.

RANDALL, J. L. *Educative and Economic Possibilities of School-Directed Home Gardening in Richmond, Indiana.* Department of the Interior, Bureau of Education, Bulletin, 1917, No. 6. Washington: Government Printing Office, 1917. Pp. 25.

Report of the Commissioner of Education for the Year Ending June 30, 1916. Vols. I and II. Washington: Government Printing Office, 1916. 8vo, pp. xxvii+692 and viii+663.

Digitized by Google

THE SCHOOL REVIEW
A JOURNAL OF SECONDARY EDUCATION

VOLUME XXV JUNE 1917 NUMBER 6

PROBLEMS PECULIAR TO THE JUNIOR COLLEGE[1]

JAMES ROWLAND ANGELL

The junior-college movement presents at least three relatively distinct forms which may well be distinguished in any discussion of the problems presented by these institutions. There is, first, the junior college built upon high-school foundations, whose beginnings are to be found in certain sporadic experiments made in Michigan and Minnesota during the late nineties. There is, second, the junior college standing alone on private or sectarian foundations as an independent organization, generally with one or more years of academy work represented in its program of studies. There is, third, the junior college as a differentiated part of the modern university. If one looks solely at the curriculum offered by each of these forms of junior college, the identities would probably far outweigh the differences, but if one has in mind the actual educational problems presented and the ideals aimed at, one must recognize very considerable divergencies.

The third type of junior college has had very few representatives. As it exists, for example, in the University of Chicago, where, so far as I am aware, it has been given the longest experimental test, it was inaugurated in the belief that a rather sharp break could be made between studies of a relatively elementary and secondary

[1] An address delivered in Kansas City, March 17, 1917, before the Junior College Union of Missouri.

Digitized by Google

character and those of a strictly university order. Undoubtedly the dividing line between the *gymnasium* and the German university was in mind, the former standing for closely supervised routine forms of work, the latter the embodiment of free, specialized, professional, and research work. It was hoped that the example set by the University of Chicago would be widely followed, that many institutions would take upon themselves the obligation to do junior-college work alone, that ultimately the University might perhaps drop its own junior-college obligations and confine itself to work of genuinely advanced character. As a mark of the completion of the junior-college work, a certificate is conferred at a ceremony designed to impress both the student and the public with the fact that a definite and significant part of the educational process has been completed, and that on the foundation so laid down the student is now ready to proceed to really advanced studies.

Although this plan still exists, it has been somewhat buffeted by the winds of educational caprice, and it has never been very widely imitated. It would be a mistake to infer that this outcome indicates any lack of point in the attempt to differentiate the work of the junior college from that which follows it, for the tendency to recognize that the dividing line between purely academic and essentially professional training coincides substantially with the division between the junior and the senior colleges has spread very rapidly, at least throughout the central portions of the country. But it does mean that few institutions with an established four-year collegiate curriculum have thought it desirable to embody the distinction referred to in a special administrative organization. At present, however, there are indications of a disposition on the part of some important institutions to take this step long ago taken by the University of Chicago and to set up a distinct junior-college organization. The problems which have most significance in this type of institution are met with again in the other forms of junior college, and to them we therefore turn.

The junior college based upon high-school foundations has perhaps been developed too newly in this particular state to make a detailed examination of its merits, its defects, or its problems, of

Digitized by Google

as much interest on this occasion as those of the junior college of the second type named. In California, in Illinois, and in one or two other states the high-school experiment has been sufficiently tried out so that certain reasonably safe conclusions have begun to emerge, but for the reasons stated the speaker thinks it inadvisable to dwell upon them specifically at the present time. Incidentally we shall have several occasions to refer to them.

It is perhaps of no very great consequence whether in the case of an independent junior college it has sprung like Athene fully formed from the head of Zeus, whether it has grown up by a process of ambitious extension from an academy of the old-fashioned kind, or whether, finally, it has come about through a process of retraction and condensation as a result of which a formerly thin and emaciated four-year course has been reconstructed into a fairly robust and well-nourished two-year program. The minor problems of adjustment which are presented in the three cases are no doubt somewhat different, but the main underlying issues are substantially alike, and for purposes of general discussion, such as the present, there is profit only in the consideration of the latter.

These institutions are confronted by one issue educationally similar to that which our high schools have been facing for many years, and for that matter some of our colleges. Shall the curriculum of the independent junior college be treated as an end in and of itself, with certain tangible values attaching to it in its own right? Or shall it be molded with sole or predominant regard to subsequent academic work? Two powerful tendencies are always tugging at one another wherever this type of issue arises. There is, on the one hand, to be considered the claims of the student who has neither intention nor opportunity to proceed beyond the junior-college level and who claims with insistent and often strident tones that he be given certain forms of vocational training which he may forthwith turn to practical economic advantage when he leaves the school. Over against this is the claim of the student who definitely expects to go on into more advanced forms of collegiate work and for whom the junior college must provide the preliminary training, or else fail of the prime function for which the student has come to it. Even if the dilemma which is thus

Digitized by Google

presented be not perfect and if a reasonable compromise as between these conflicting interests be frequently found practicable, the issue nevertheless remains as to whether the junior college is to be master of its own fate, setting up its own ideals and realizing them as best it may, or whether it is to be, in the main, simply an adjunct, an understudy, of institutions of more advanced type.

It is the judgment of the speaker that dogmatism in dealing with any of these questions which are presented to the present generation of junior-college administrators would be wholly premature and unjustified. The wholesome thing at this stage of the game is unquestionably to formulate clearly the problems presented, to seek intelligently their solution, and to judge objectively, as time goes by, of the success or failure of the various methods investigated. The only unwholesome and pernicious condition is one of blind and aimless drifting.

With this position as a premise, it would be the judgment of the speaker that the junior college ought to attempt very definitely to formulate its own aims and ideals and, while keeping itself in touch both with the institutions below it and those educationally above it, to safeguard its own individuality as of the very essence of its life. We can hardly have too much of intelligent experimentation in these days of educational exploration, and well-considered, thoughtful divergence is far more wholesome than unreflective conformity to type. Conformity represents a vastly easier achievement, but it can hardly hope for equally valuable returns.

The instant, however, that one advocates divergence and independence of type one is likely to be misunderstood as indorsing vagaries of practice which have behind them nothing more substantial than the attempt to cater to and exploit some financially advantageous but possibly shallow fad, or to humor the ill-advised eccentricity of some president or head master or some well-to-do donor. What is contemplated in the phrase "divergence of type" is not for a moment to be construed as an encouragement to laxity of academic standards. Of this we shall say more in a moment, but the great menace which constantly hangs over the small junior college is the temptation to let down its standards, to hunt every

Digitized by Google

educational will-o'-the-wisp which promises fiscal prosperity, however transient.

In the case of junior colleges built upon high-school foundations the individualistic tendency to which reference has been made is already apparent in the disposition to carry still farther the movement already begun in the old conventional high-school organization, and so to mold the curriculum as to cater directly to whatever local interests and local opportunity may be judged to demand. While perhaps the most natural, because the most obvious, thing is substantially to copy forthwith the curriculum offered in the first two years of the ordinary college, the effort to individualize the independent junior college deserves serious consideration, whether from the point of view of serving local needs or from the point of view of developing specific educational ideals, particularly those of a vocational and professional character.

In the long run, however, it is probably more important that the quality of the training offered by junior colleges should be of unequivocal character than that each should undertake to differentiate itself sharply from other institutions. The differentiation is reasonably likely to take care of itself, provided the college does not conceive its task as consisting merely in the effort to copy the curriculum of some other institution held up as a model. There is no doubt that the intellectual tone of an educational institution tends to get set in terms of the character and standards obtaining in the most advanced work which it attempts. There can be no question, for example, that a vigorous graduate school reacts back very distinctly upon the quality and temper of the undergraduate instruction in institutions where the two exist side by side. Any four-year high school is similarly sure to feel the tonic influence of the addition of two years of more advanced work. It seems reasonable, therefore, to suppose that a junior-college organization carried on in geographic separation from senior-college work may find itself at some slight disadvantage, and this the writer believes to be unavoidably the case. On the other hand, as a very definite offset to this consideration is the fact that for the most part the junior colleges thus far established have had to deal with a relatively limited number of students, and that as a consequence of this a

Digitized by Google

much more detailed supervision of the individual pupil is often possible than the larger institutions covering a four-year course can give. The writer is not aware of any statistical study of the attainments of students developed in institutions like the Missouri junior colleges when brought into comparison with students trained in the standard four-year institutions. The statistics published by the University of California with reference to the achievements of students coming to the University from the junior-college high schools in that state are decidedly flattering to the latter when the training is compared with that offered by the first two years of the University itself. The conclusion of the matter is, then, that the separate junior-college organization undoubtedly loses something of stimulation and outlook as contrasted with the corresponding divisions of work in the four-year college; but this disadvantage may in practice be more than offset by the detailed care and supervision of the individual student often rendered possible by the smaller and more compact organization of this type of institution.

Another and absolutely vital element which must enter into junior-college procedure, if the results are to be sound and lasting, is the maintenance of the best possible standards in the qualifications of members of the faculty. In the last analysis this matter comes back to intelligent selection on the part of the officials responsible for appointment and to the salary scale which is established. Some men will undoubtedly always prefer to work in institutions doing the more advanced types of work, even though this involves some financial sacrifice. But, on the other hand, if proper salaries are paid, there will never be any difficulty in getting well-trained individuals to whom work in an institution of this junior-college type will strongly appeal, particularly if the point made earlier is taken into account, and such institutions commit themselves in part to the development of individualistic educational experiments, instead of attempting to conform to some narrow and stereotyped model, however intrinsically good such a model may be. This statement should obviously be qualified by the assumption that the junior college in question is prepared to offer adequate library and laboratory facilities and to call upon its staff for reasonable hours of work. Under these conditions there

Digitized by Google

should never be any long-continued difficulty in equipping the staff with men of adequate training and endowed with the real qualities of the teacher.

Three of the matters touched upon in the preceding paragraph, to wit, salaries, laboratories, and libraries, have been the subjects of very wide discussion in recent years, and attempts of various kinds have been made to state specifically the standards which a reputable institution should meet. In the present case it would be idle to enter on any elaborate exegesis of the situation. Suffice it to say that, in the judgment of the speaker, the independent junior college ought, if possible, to be equipped with even stronger scholars and more commanding personalities than those to whom in the four-year college is often confided the instruction of students in their first two years of college residence. Whatever it is necessary to pay such men ought to be given. And an institution which cannot see its way clear to the maintenance of such a salary schedule ought to search its heart very thoroughly before it decides to embark permanently on a junior-college enterprise. The great bane of American education from the district school up has been the superficiality and the crudity of the instruction offered, and it is wholly intolerable that a new educational movement like that of the junior college should be launched without committing itself absolutely to high educational standards. Let no one suppose that we mean to indict the entire pedagogical caste as made up of incompetents, but what we do allege fearlessly is that we have never remotely approached as yet the thorough preparation of anything like the number of teachers required to equip our educational machinery. The inevitable consequence has been the turning loose upon our children and young people of vast hordes of ill-trained teachers, many, perhaps most, of whom have been armed with wholly good intentions, but with little else.

In the case of the junior college based upon the public high-school organization there is divergence both of theory and practice as to whether the two parts of the educational organization should be kept wholly separate—the students, the faculty, and the buildings occupied being entirely distinct. Much is to be said on each side of the question. Favorable to the separation of the two is the

Digitized by Google

alleged ability to develop an *esprit de corps* which otherwise it is impossible or extremely difficult to achieve. It is said that you can secure a higher type of instructor for the junior college if it be wholly severed from its high-school antecedents. It is also alleged that to mix high-school students in the classes of the junior college, even though they be intellectually capable of carrying the work, is disintegrating to the tone of the college. Over against this it is alleged that where no boundary lines are drawn the abler students are encouraged to go forward as rapidly as their capacities permit, and that by keeping the two divisions of the work in close contact with one another a much more intelligent appreciation is gained by the teachers of the peculiar problems arising at the different levels of the educational process. It is further maintained that the transition from the fourth year of the high school to the first year of the college marks, in fact, no sharp intellectual change of level, and that it ought therefore to be minimized rather than magnified by the methods of our educational organization.

Whatever verdict may be returned in this particular case, the issues raised are undoubtedly familiar to many, if not all, of the junior colleges on private or sectarian foundations, for they generally maintain an academy or preparatory school out of which they receive a large proportion of their students. For them too, then, the question is one of vital consequence. The present speaker has had no such experience as would justify even a tentative opinion about the matter. It would be a mistake to suppose that either practice enjoys an absolute monopoly of advantages. The chances are that something is to be said for each form. We should probably have to decide in terms of the greatest amount of advantage as related to the least serious disadvantages. But there is no reason why we should not begin to make a careful study of the matter and, if possible, subject it to objective tests such as are presented by the achievements of students coming out of institutions administered in the two different ways when they enter upon more advanced forms of work. This would get us away from the purely subjective realm of opinionating and present us with materials which, if adequately gathered, would ultimately come to have convincing objective force.

Digitized by Google

In the nature of the case the junior college based upon the public high school is almost certain to be administered without residential halls. The privately endowed junior college is, on the other hand, likely to have these as one of its characteristic and important features. The very same sort of motive which now impels parents to keep a boy or girl at home for work in a local junior college, instead of sending him or her away to the state university or to some other large four-year college, may determine the placing of the student in a junior college under residential control. The decision is made partly because the institution is likely to be smaller and, as has been previously remarked, the supervision exercised is thus apt to be correspondingly more intimate, but it may be largely influenced by the belief that the supervision can be carried out under *residential* auspices of a more satisfactory kind than that offered in a larger institution. Although many people will object to the word, the frank fact is that the advantage looked for in such a case is that, in general, which may be hoped for from a good boarding-school—general deportment, social poise, the acquirement of etiquette, the mastery of the commoner social graces, tender plants which often grow with utmost difficulty in domestic soil, but which optimistic parents and still more optimistic head masters and head mistresses have the courage to believe will sprout and bear palatable fruit in the surroundings of a boarding-school. That these hopes are often dashed in the cruel school of experience does not prevent their springing again into life with every new generation and does not prevent the further and more reassuring fact that in many cases they are justified in their faith.

The speaker is too ill informed by personal observation to comment upon the peculiar social problems which belong to these junior colleges; but it is perfectly certain that such problems will present themselves and that they will be in some trifling details at least different from those which puzzle the high school on the one hand and the older college organization on the other. Snobbery, caste distinctions, club aristocracy, and all the other social fauna and flora known to educators are sure to appear in one form or another and to present perplexities which are likely to be more

Digitized by Google

rather than less acute where the college is fundamentally dependent upon the tuition income for its existence. Indeed, the most insidious danger to which the smaller institutions are exposed, whether they be on sectarian or purely private foundation, is that to which the small private school has always been exposed, namely, the danger of vicious subserviency to powerful patrons. The danger is familiar to everybody who knows anything of the history of private institutions, and need not be here discussed at length. It would be absurd to deny its reality. It must be reckoned with, be courageously faced, and this can be the more easily done where institutions of similar class combine in organizations like your own that may put before the public their common interests and their common ideals.

The motives which have for the most part been operative in bringing about the creation of junior colleges have been somewhat opportunist and have reflected immediate expediency rather than a thoroughgoing effort to reorganize American educational practice. There is, however, very little doubt that the general drift, both of theory and practice, has been toward such a redistribution of institutional jurisdiction as will give us, in place of the present grade school with a four-year high school and a four-year college course built on top of it, a realignment carrying the last two college years off into a group by themselves as the preparatory portions of training directed toward the professional degrees or toward the doctorate. The remaining two college years show in their turn a tendency to become affiliated with the fourth and perhaps the third year of the present high school, giving us a four-year institution made up roughly of the last half of the high-school course and the first half of the college course. Below this institution will perhaps ultimately be found the junior high school, reaching back to absorb one or two of the upper years of the grades and leaving at the bottom a graded school of six years' duration. The warrant for a division of educational jurisdiction approximately like that described has for its justification in part the educational experience of other civilized peoples and in part an intensive study of the important stages in the mental and physical growth of children. There are to be added to these considerations, in the case of the distinction between the junior college and the senior college, certain practical matters con-

Digitized by Google

nected with the ages at which young people can profitably enter upon the work of self-support. These matters, however, cannot be here discussed. Suffice it to say that the period at which junior-college training is completed under ordinary conditions represents a more strategic line of division than either that at the end of the present high school or that at the end of the present four-year college.

There is likely to be a certain artificiality and arbitrariness in one's thinking if the plane of division between the junior and the senior colleges be regarded too rigidly and as though it were set up by two mutually exclusive curricula. The fact of the matter is that just as the present Freshman year in college reaches back into the subject-matter of the high school, offering again much that the student might have pursued had time permitted, so the senior college must inevitably overlap in its subject-matter certain features of the present junior-college régime. The students who now present themselves at the conclusion of a junior-college curriculum have often pursued widely differing courses. As a consequence some of them are much more advanced in certain particulars and much less advanced in others. The senior college must be prepared to adjust itself to this irregularity of preparation, but in so doing it will necessarily offer a certain amount of work which the junior college at present contains. A single illustration may make clear the situation, with which everybody is presumably personally familiar.

A student who has gone up through the high-school course with two or three years of modern language will be able during his junior-college program to pursue literary and linguistic work of a decidedly advanced character. His fellow-student who has had only one such year's work, or perhaps none, will, during his junior-college course, be able to pursue only courses of a more elementary or intermediate character. The senior college is likely to feel itself obliged to care for this less well-trained student, and it will therefore offer intermediate courses in the literature concerned which are already to be found in the junior-college program. All this is by way of saying that wherever we draw our institutional lines we must recognize that they stand for certain large general values and

Digitized by Google

for certain administrative conveniences which we think worth while, but that they do not represent any such rigid segregation of subject-matter as characterizes, let us say, the separation of the strictly professional work in a law school or medical school from the general average of academic studies.

It is a common American prejudice to feel confidence in men rather than in measures, in personalities rather than in methods. No doubt this attitude often leads to excess and exaggeration, but it is probably fundamentally sound. Whatever your methods or your laws, the actual results attained are conditioned upon the intelligence, the energy, and the fidelity of the men called upon to put them in operation. So it may be said of the junior-college movement which we are now considering. It is, in the judgment of the speaker, part of a large and growing movement which promises to become an integral part of our educational scheme. But its present advantages and disadvantages, from the point of view of theoretical organization, are of the most trifling moment as compared with the caliber of the individuals called upon to direct and to administer it. If the men in charge of the junior-college enterprise be men of really modern training, of genuine intellectual outlook, and if they have both conviction and energy, the balance of good which will accrue from the movement will enormously outweigh any elements of evil. But unless there are thoroughly substantial men at the helm, unless the professional level of the teachers in these institutions be kept unequivocally high, and unless they be given at least respectable equipment in point of buildings, laboratories, and libraries, the outcome is sure to be simply one more of the failures or half-way successes with which educational history is strewn. Quality in the character of the instruction, quality in the character of the student admitted, and, most of all, quality in the student graduated from the institution, are the all-important considerations. Compared with this all purely formal issues, all questions of a merely administrative character, are wholly secondary. And among the qualities paramount to all others is that of rigid and precise honesty of statement regarding the conditions under which the institution is really administered. It is all very well to announce that an institution requires fifteen units of high-

Digitized by Google

school work for admission, but if it appears that when put to the test a student will not be refused who must enter conditioned in four or five such units, or if it proves that the scrutiny of actual units accepted is so superficial as to amount to nothing, the whole moral tone of the situation is sapped and undermined.

In conclusion, it seems clear to the speaker that despite the very various motives which have contributed to the inauguration of the junior-college movement and despite the wide divergence of type represented in the institutions now being administered under this title, there is underlying the whole situation a deep and widespread body of interests to which the new organization promises to give far fuller expression than has hitherto been possible. The movement is certainly in its main lines consonant with our best educational opinion, and it ought to receive, as no doubt it will, the most sympathetic opportunities to demonstrate its peculiar values.

Digitized by Google

EXPERIMENTS IN SUPERVISED STUDY

I. M. ALLEN
High School, Springfield, Illinois

Dissatisfaction with the study habits of high-school pupils led me, as I suppose it has led every other manipulator of supervised-study schedules, to break with customary administrative programs. Investigations carried on by Giles, Reavis, Breslich, Minnick, Burch, and Alfred Hall-Quest with reference to the study habits of high-school pupils lead us to the following conclusions:

1. That high-school pupils do not, as an average, devote in and out of school much more than thirty minutes to the preparation of a lesson.

2. That very few high-school pupils preparing lessons at home establish regular and systematic study habits.

3. That the pupils who need most to establish proper study habits come largely from homes that fail to encourage or to make possible such habits.

4. That the larger percentage of pupils prepare lessons by the "close the book and recall" method of preparation.

5. That the slower pupils in mathematics classes conducted on the no-home-study plan do better work than in classes conducted on the home-preparation plan.

6. That high schools under the usual form of schedule do not offer instruction in "how to study."

I. MECHANICS OF SUPERVISED STUDY

The lengthened-divided-period plan is probably the best-known supervised-study scheme. Its technique and operation are described in Johnston's *Modern High School* and in the December number of the *School Review*, 1916.

This plan of supervised study was used by the writer as early as September, 1911. Briefly described, the seven or eight periods

Digitized by Google

of the orthodox high-school schedule are telescoped into four or five periods, and each resulting period then stretched into one of combined recitation and study. Such a schedule generally consists of five periods from sixty to eighty minutes, or four periods from eighty to ninety minutes, in length. The school day is lengthened by one hour. Beginning with five sixty-minute periods of combined recitation and study, I was soon convinced that twenty minutes for study was not long enough. It was neither hay nor grass.

The following year the five periods were lengthened to seventy minutes and divided equally between recitation and study, and subsequently the schedule was extended to seventy-five minutes with forty minutes for recitation and thirty-five for study.

After experimenting with supervised study over a period of four years I made the following recommendation to the Board of Education of Wichita, Kansas:

> The statistics of scholarship accumulated over a period of four years seem to indicate conclusively that the administration of a supervised-study schedule reduces the percentage of failures and eliminations. After evaluating all of the statistics and weighing carefully all of the objections urged against the plan, I recommend that the system be continued and suggest the following modification of the system:
>
> First, allow forty to forty-five minutes for recitation.
>
> Second, arrange at least forty minutes for study, instead of thirty, and under no circumstances allow the teacher to trespass upon the pupil's study time.
>
> Third, as soon as possible train teachers in methods of teaching pupils to study.

Obviously two prime objections stood against supervised study after several years of trial in one school: one against the mechanics of the scheme and the other against its dynamics.

Mechanically supervised school study to be effective requires an adequate period for its administration. Nothing less than forty to forty-five minutes will suffice. As one high-school boy put it, "Our present thirty-minute supervised-study period (when the teacher does not steal it) leaves us with little dabs of lessons left over, with just as many books to carry home, and the best part of the day gone."

Digitized by Google

How to get an eighty- to ninety-minute period without lengthening the school day beyond four o'clock and beginning it before eight-thirty is a problem in the mechanics of supervised study. It may be solved in two ways:

1. A five-period program may be operated on the floating- or displacement-period basis. For instance, the fifth period may displace in turn each of the four preceding periods on each successive day of the week, and on Friday it would displace itself. This results in a four-period-a-day schedule or a maximum of twenty recitations per week for each subject. This is my present method of securing a four-period-a-day schedule in the high school at Springfield, Illinois.

2. Another way is to arrange a four-period-a-day schedule with a maximum of twenty-five recitation periods per week. This is the simplest and best method, but is evidently 25 per cent more expensive in teaching force, and is consequently prohibitive in many schools. This plan is explained in the *School Review* for December, 1916, by Principal Roberts.

It may be conceded then that the mechanics of supervised study for both large and small high schools may be solved without increasing the teaching force. Six-, seven-, or eight-period-a-day schemes may be transformed automatically into a corresponding four- or five-supervised-study-period schedule.

II. DYNAMICS OF SUPERVISED STUDY

Our problem in dynamics still remains, however. After we have mechanically constructed a period for supervised study, how are we going to secure it? How are we going to teach pupils how to study? What will it profit a school to have gained a supervised-study schedule and missed supervised study itself? This is the all-important question. On this answer hangs all the law and gospel of supervised study. Whipple says:

> Students in both high school and college have been studying, it is true, for years, but too often they have not been studying efficiently, have not formed right habits of mental work, and indeed do not even know how to go about the development of an adequate method or plan of such work. . . . . It is safe to say that failure to guide and direct study is the weak point in the whole educational machine.

Digitized by Google

The lengthened-divided-period plan of schedule provides in itself the *conditions* necessary for effective study by making both time and place for study regular and automatic and by increasing the opportunity for focalization and concentration of attention. Immediately and automatically following a recitation with an opportunity to prepare the next day's lesson under the direction of the same teacher will not *ipso facto* create an efficient learning response on the part of all students, but it will *make more probable* such a response.

It has been erroneously assumed by many writers that supervised study was synonymous with effective study. It has been taken for granted that schools administering supervised-study schedules taught pupils how to study. There is a wide difference between *more* study and *effective* study. Supervised-study schedules may secure the former and miss the latter. Effective study depends upon many elements, among them proper time and place, concentration, reading ability, organization habits, questioning habits, and memory. Supervised-study schedules mechanically provide for the first two and more nearly secure the third than do other devices. The remaining elements involved in the technique of study are not necessarily concomitants of so-called supervised study.

Time, place, and mental attitude—these three are the triune planks in the supervised-study platform. But let no supervised-study-schedule manipulator delude himself into believing that these three planks constitute the whole platform of effective study. No mechanical devices ever invented will solve this trick in the dynamics of learning known as "how to study."

In 1915 I advised that teachers should be taught the methods. The following year "Why and How to Study" blanks were pasted in every pupil's books with varying instructions for the different subjects. The technique of learning was analyzed, and teachers and pupils were made familiar by printed instructions of how to master it best. By telling him *how* to do it we might as well expect a boy to get the trick of throwing a twelve-pound shot. Two factors are necessary in mastering any process—learning included: (*a*) capacity and (*b*) artistic exercise of one's capacities.

Digitized by Google

Evidently a supervised-study schedule is no *sine qua non* for securing the factors which depend so largely upon the personality of pupil and teacher. Effective study so often appears the possession of the Lincolns and the Greeleys who knew no school schedules that one should speak guardedly about administrative-school devices solving any dynamic problem in education. However, better study, more study, concentrated study, are desirable goals in school administration, and the improvement in the use of this lengthened-divided period was the writer's next experiment.

The origin of the plan I am about to describe grew out of study of the classroom exercise in typewriting. In the typewriting class pupils remain in the same group, but are individually apart. A pupil taking typewriting may stay out of school for two weeks and return to the same group in his mathematics, Latin, and typewriting. In the last subject he starts in exactly where he left off with a distinct realization that his muscular-mental co-ordination has been impaired, while too often in the first two subjects he takes up the advanced work with his classmates apparently without any particular sense of loss. Why should he, if he makes his grade? Does he not figure out a distinct gain?

Two things differentiate the mechanics of the typewriting exercise from the mathematics and Latin recitations: (*a*) consecutive, daily assignments which the pupil may follow without the guidance of a teacher; (*b*) individual responsibility and progress or an accounting for individual differences. Apply these same principles to academic subjects and it becomes necessary to provide printed daily lesson assignments and to check upon individual preparation of these daily assignments. One added factor, however, appears with the academic subject which uniquely distinguishes it from the manual, namely, the *expression* of the lesson ideas.

In typewriting the pupil during the exercise concretely and muscularly shows the teacher how well he understands the lesson. In academic subjects the understanding must first be tested by language expression. There is no machine yet invented for eliminating this language-expression exercise. Consequently for all academics there must always remain the recitation period. *Throwing one's ideas into a language mold is not the same as expressing*

Digitized by Google

one's ideas by mechanical means. For this reason the recitation period must always be stressed.

These common and distinguishing elements of the manuals and the academics being considered, it appears that recitation groups should be organized on the basis of the preparation of definite unit assignments. Epitomized, *pupils should not recite until they have prepared.* This called for a scheme that involved the execution of the following desirable goals already set forth:

A. Preparation: (1) auto-assignment of daily lessons; (2) advancement according to individually tested preparation.

B. Recitation or expression: (1) recitation only over work previously prepared; (2) recitation in groups selected on basis of preparation.

The evolution of a scheme that would incorporate these ideas resulted in what is now known as the Springfield laboratory-recitation plan.

III. THE LABORATORY-RECITATION PLAN OF SUPERVISED STUDY

It will be impossible in the narrow limits of this paper to do more than outline the laboratory-recitation plan of supervised study now in operation in the Springfield High School. The laboratory-recitation plan is based on the fundamental idea that recitation groups should be organized on the basis of preparation. Pupils need not recite on the day's preparation, but the recitation for the day is upon work previously prepared and tested. The recitation teacher knows that when his group assembles each and every pupil has previously prepared and has been checked in the work to be recited upon, otherwise the pupil would not be in the group. This is accomplished by the following *modus operandi:*

A. Co-operating laboratory-recitation teachers.—Forty or fifty pupils are assigned to a certain laboratory-recitation period operated by two teachers—one the laboratory, the other the recitation, teacher—in adjoining rooms. While the laboratory teacher is supervising the preparation of lessons during the ninety-minute period, the co-operating recitation teacher is conducting recitations with groups of pupils taken from the laboratory on the basis of

Digitized by Google

their preparation. For illustration, each Friday the laboratory algebra teacher in the second period will give the co-operating recitation teacher of that class and period the advancement of the slowest pupil in each of two or three recitation groups previously determined on the basis of laboratory preparation. The recitation teacher prepares his work for the following week on the basis of this information. If there are three groups, the recitation teacher devotes thirty minutes to each group; if two groups, forty-five minutes. The pupil spends either one-half or two-thirds of each period in the laboratory, the time depending upon the number of groups into which the recitation has been divided, and the remaining time in recitation.

B. The laboratory technique.—Two things must be provided for: auto-assignment of lessons and checking of pupils on the lesson assignment. The first requires the printing of the daily lessons in manual form and the second the checking of pupils by laboratory teacher and student assistants. The following are sample lessons taken from the algebra and Latin manuals:

FOR EXERCISE 52

DIFFERENCE OF SQUARES—INCOMPLETE MIDDLE TERM

(1) Is the expression $x^4+x^2y^2+y^4$ a trinomial square? Why? What is a trinomial square and how recognized? What could be added to the expression above to make it a trinomial square? If such a number is added why must it be subtracted at the same time? How do you always tell what this number is?

(2) Factor the above problem:

Solution:

$$x^4+x^2y^2+y^4$$
$$=x^4+x^2y^2+y^4+x^2y^2-x^2y^2$$
$$=x^4+2x^2y^2+y^4-x^2y^2$$
$$=(x^4+2x^2y^2+y^4)-x^2y^2$$
$$=(x^2+y^2)^2-x^2y^2$$
$$=[(x^2+y^2)+xy][(x^2+y^2)-xy]$$
$$=[x^2+y^2+xy][x^2+y^2-xy]$$
$$=[x^2+xy+y^2][x^2-xy+y^2]$$

How does this carry out the suggestion above as to adding and subtracting at the same time?

(3) In the second line of the above solution you should recognize the same type of problem as Exercise 50 and apply the same principle to the solution.

Digitized by Google

LESSON XIV

(Sec. 91–92–93–94–95; vocab. sec. 95) (Review vocab. 86, 90)

1. How does the declension of nouns ending in "er" and "ir" differ from the declension of "servus"?
2. How do we know when to keep "e" in the base and when not?
3. How are adjectives in "er" declined?
4. What forms of the adjective show whether we keep "e" in the base or not?
5. Prepare Application Card XI.

After the pupil in the laboratory has studied algebra lesson No. 52 or Latin lesson No. XIV, he is checked on his understanding of the lesson by a few individual test questions. If the pupil's preparation is satisfactory, he then calls at the clerk's desk for application cards No. 52 or No. XI and sets about to solve the exercises. These particular application cards are herewith reproduced:

CARD 52

Factor the following:

1. $x^4+x^2y^2+y^4$
2. $4x^4+3x^2y^2+y^4$
3. $9x^4+15x^2y^2+16y^4$
4. $25x^4-6x^2y^2+9y^4$
5. $x^8-8x^4y^4+4y^8$
6. $25x^4-11x^2+1$
7. $x^{16}+x^4y^6+y^4$
8. $x^{16}+x^8y^8+y^{16}$
9. $16x^4+52x^2y^2+49y^4$
10. $1-3a^2+a^4$
11. a^4-11a^2+1
12. $64a^4+1$
13. $4x^4+y^8$
14. $x^4-107x^2y^2+169y^4$
15. $x^4-95x^2y^2+169y^4$
16. x^4+4
17. $25a^4+116a^2b^2+144b^4$
18. $64a^4-1$
19. $4a^2b^2-5ab+a^3b^3$
20. $25x^4-5y^4$

Latin 9′

APPLICATION CARD XI

I. 1. Cornēlius puerīs scūta et loricas dat.
2. Dominī fīlia pulchra in agrīs laborat.
3. Est cōpia frūmenti in oppidō.
4. Lēgātūs est apud legiōnāriōs sed servus est cum virīs.
5. Līber Germaniae populus Rōmānōs non amat.

II. 1. The pretty girls are hastening with the boys to the town.
2. The men of Germany give plenty of money to the sons of the master.
3. The friends of the free boys carry spears and shields.
4. Who is the man with the horse and cart?

Digitized by Google

The solutions of exercises are checked by laboratory teachers and capable student assistants, and no pupil gets credit for the completion of a lesson and its applications until the laboratory requirements are satisfied. Pupils advance from lesson to lesson as fast as they are able. Initiative is encouraged, and the brighter students on the auto-assignment basis need little assistance. Other pupils, particularly the slow ones, are given the assistance needed, either individually or in groups.

Already a technique of manipulating laboratory work has developed which it is impossible to describe within the limits of this discussion.

C. Recitation technique.—As already stated, the co-ordinating recitation teacher in any period has pupils assigned to him on the basis of laboratory advancement. In some classes it is better to make three divisions and in all, two. The recitation teacher does not conduct recitations on work concurrently prepared in laboratory, but upon prepared work, antedating the recitation, in the case of some students, several days. This, we believe, is a good pedagogical practice. Reciting upon material which has been simultaneously prepared encourages cramming and rote memorizing. Recitation upon work previously prepared, but not for the particular recitation, develops selection, organization, and emphasis of certain lesson materials; while familiarity with advance material occupying the immediate laboratory attention affords an opportunity for more reflective, penetrating, and discriminating judgment upon the subject-matter of the recitation.

The recitation groups are flexible; pupils reciting in the advanced groups often find themselves demoted to a less-advanced group if it is discovered that their laboratory advancement has been too rapid. On the other hand, pupils are promoted to advanced recitation groups if it is found that their preparation warrants it.

D. Outstanding problems.—The specialization upon preparation and the conduct of recitation in groups determined by laboratory checks has caused one problem to stand out conspicuously. I say stand out because I believe it has always existed, but we have not been so painfully aware of its existence. Under this system the pupils unable to do the minimum, either because of lack of capacity

Digitized by Google

or inability to exercise capacity, come at once into conspicuous view. We have repeatedly said, "Given time, and attention, sympathy, and properly motivated teaching, and any pupil will respond." Our system provides these essentials better than the old, but our problem in this respect is more acute than before. We actually know how long it takes some pupils to prepare their lessons, because the system calculates it. There must certainly be a point beyond which it is waste and useless effort. If a pupil cannot get thought from the printed page, then, instead of assigning him to regular literature and history courses, he should be assigned to a special class where the preparation of the lesson consists primarily in assistance in reading and selection of ideas from the page, and the recitation is an exercise in thought development and expression. This is the direction in which we are being pointed at present, and another year may see undertaken some experiment of this nature.

IV. A CONCRETE ILLUSTRATION FROM THE LABORATORY-RECITATION PLAN

Perhaps the best way to illustrate the application of the foregoing plan would be actually to take a pupil and carry him through both laboratory and recitation. This I have undertaken to do with a certain pupil, Robert, who prepares his oral-theme outline in laboratory, recites upon the same in his recitation group, reduces the same to writing in laboratory, receiving his criticism thereon and, finally, re-checks his written theme from these corrections. Ordinarily such a process would extend over a period of two days. Here Robert, for the purpose of this paper, continued his progress through laboratory and recitation during one afternoon, much to the loss of equilibrium for Robert, as he so declared in recitation.

A. Laboratory Assignment

CARD XX PART 2

Plan to tell orally to the class the most exciting adventure that has happened to anyone whom you personally know.

Digitized by Google

FIRST OUTLINE SUBMITTED BY ROBERT

WEALTHY FARMER HAS NEAR ESCAPE FROM DEATH

The lead: James Branden, a wealthy farmer living near Springfield, was saved from death yesterday when he leaped to an incoming passenger train.

Situation: Mr. Branden had gone to town on business and then returned home.

Climax: His car stopped on train tracks and the engine refused to work. Passenger train neared the automobile of Branden.

Dénouement: He saved his life by springing from his car to the engine of the passenger train.

LABORATORY TEACHER'S CRITICISMS OF OUTLINE

T.: What did you intend this first line for?

P.: The first line is supposed to be the headline.

T.: Do you see any mistake in grammar?

P.: Yes—near.

T.: What part of speech is near?

P.: Verb.

T.: Is it used there as a verb? How is it used?

P.: It should be an adverb.

T.: What does it modify?

P.: In this sentence, escape.

T.: What part of speech is escape?

P.: Noun.

T.: What do you call a word that modifies a noun?

P.: An adjective.

T.: Near is what, according to the dictionary?

P.: Near means close.

T.: What part of speech is near? May it be used as an adjective?

P.: It probably could.

T.: Where would you look to find out? Look that up.

Pupil consulted dictionary and found near used both as an adjective and an adverb.

T.: What word could you substitute for near?

P.: Narrow.

T.: Is there a difference between the two?

P.: Yes. Near does not explain so much as the word narrow.

T.: Your lead is good. Under your situation, this should be, "He started and was returning to his residence." Why?

P.: Because he had not reached his home when this happened. I could say, "Mr. Branden had gone to town on business and started to return to his residence."

[The remaining portions of an extended conference are omitted.—EDITORS.]

Digitized by Google

OUTLINE FOR SECOND THRILLER (PREPARED IN LABORATORY BY ROBERT)

WEALTHY FARMER HAS NARROW ESCAPE FROM DEATH

The lead: James Branden, a wealthy farmer living near Springfield, was saved from death yesterday when he leaped from his automobile to the engine of an oncoming passenger train.

Situation: Mr. Branden had gone to town in his automobile on business and then started to return to his residence.

Climax: His car stopped on the railroad tracks and the engine refused to work. The passenger train neared the automobile of Branden.

Dénouement: He saved his life by springing from his car to the engine of the passenger train.

B. RECITATION

(Robert gives oral theme in recitation group)

A SECOND THRILLER

James Branden, a wealthy farmer living near Springfield, yesterday had a narrow escape from being killed. He was coming to town in his car. In the center of the railroad tracks it stopped. Mr. Branden tried to get the engine to work by means of the self-starter. He could not move it. He saw a passenger train approaching, but waited two or three minutes and grabbed a hold on the engine. Thus he was saved from being killed. In five minutes the train stopped and he regained his conscience. Now he was taken from his situation unhurt.

CLASS CRITICISMS

He was familiar with his outline.

He followed his outline well.

It was good.

It held us in suspense.

T.: Another criticism to show its good points?

He had a good lead.

T.: Did he accomplish his purpose?

The thrill was all right, but was illogical. He saw a passenger train and waited two or three minutes and jumped on the car and in five minutes the passenger train stopped. Rather slow for a passenger train.

T.: What about the situation? Was that clear? What about the dénouement?

P.: Those were clear.

He said, "regaining his conscience" (sense or consciousness).

He said, "git and grabbed a hold."

He said, "He was taken from his situation unhurt."

He said, "Living near Springfield yesterday."

Digitized by Google

Change of verb tenses. Started with past and then said "he now. . . ." Incorrect pronoun: "When he got to the railroad track it stopped."

ROBERT: *I had to go so slow for the stenographer to get it that I did not give it the way I wanted to.*

A. ROBERT'S NEXT LABORATORY EXERCISE—REDUCES ORAL THEME TO WRITING

WEALTHY FARMER HAS NARROW ESCAPE FROM DEATH

James Branden, a wealthy farmer living near Springfield, was saved from death, yesterday, when he leaped from his automobile to the engine of an oncoming passenger.

Mr. Branden had left his farm, in the early part, in his automobile for town to attend to some business and had now started to return home by the way of Cook Street, a street which leads to his farm.

When his car reached the center of the railroad track on Third Street it stop. He tried to get the engine to work by pushing the self-starter with his foot, but it would not work. He then started to get out of his car to examine the engine, but so frightened, by the sight of an oncoming passenger train that he could not move hand or foot.

Finally he regained his senses and saw that the only way for him to save his life was to jump. Just as the engine of the passenger train was about to strike his car he sprang from his seat to a rod that was on the side of the engine and held there till the engine came to a stop.

The enginere of the passenger train brought the engine to a stop and removed Branden from his place.

It was found that Branden received no injuries.

LABORATORY CORRECTIONS BY ROBERT

1. A comma is needed here. Rule. Every appositive should be set off by a comma.
2. Word omitted, train. This is necessary to make sense.
3. Words omitted, "of the day." These are necessary to the sense.
4. Mistake in grammar. I should use the past tense, stopped.
5. Word omitted, was. It is needed to finish the verb.
6. A new paragraph should not begin here, for this is not a new thought. It belongs with the sentence that precedes it.
7. Mistake in spelling. It should be engineer.

The experiments with supervised-study schedules may be summarized as follows: (1) The mechanics of supervised study consist in securing a regular time and place for study and a concentration upon study during the school day. This is provided by the

Digitized by Google

supervised-study schedule in which the period is from eighty to ninety minutes in length. The mechanical means of accomplishing this without unduly lengthening the school day has been explained. (2) The dynamics of supervised study refers to the mastery of the technique of study or to the art of how to study. The writer has never flattered himself into believing that so-called supervised study was synonymous with effective study.

Mr. Roberts in the December, 1916, *School Review*, in concluding his article on supervised study in the Everett High School makes a very significant statement:

> We believe that supervised study in the form we have it is a success, but not the final solution of this great problem; it is a step, an arrow, at once an indication and the recognition of a tendency to correct one of the weak spots in our work. It will serve its day and purpose, and be superseded by some plan which will eliminate the difficulties and add to the advantages which we have noted for the double-period plan.

This is a view that I have always shared with reference to supervised-study schedules. The modification of supervised study to provide for individual differences under the laboratory-recitation plan outlined in this paper is in my opinion a direction of the "arrow" a little nearer the goal of effective study.

Digitized by Google

A STANDARD OF INTERPRETATION OF NUMERICAL GRADES

LEROY D. WELD
Coe College, Cedar Rapids, Iowa

A great deal has been written regarding methods of standardizing teachers in the grading of pupils, and various schemes are in use whereby teachers are constrained to exercise arbitrary rules of judgment in order to make the results of their grading fulfil certain theoretical conditions.

We are told, for example, that, in some large American colleges and universities using forms of the so-called "Missouri system," it is expected of teachers that a specified percentage of their assigned grades shall be above 90, another specified percentage between 90 and 80, etc. (or the equivalent of these figures in terms of letters), and that the distribution thus sought is approximately that of the familiar, symmetrical "probability" or "error" law.

It is not the purpose of this paper to discuss the merits of either numerical or literal grade assignments, or of the categories "excellent," "good," "fair," etc., as against any sort of grade scale. We shall start out with the simple fact that among the great masses of our school and college teachers and pupils, the one common language in which the scholarly attainments of pupils are expressed is a scalar one, which may as well be numerical as literal or otherwise arbitrary. If we, who live in the Middle West, read in a New York magazine that a certain man entered college with an average grade of 95 in his preparatory work, we know pretty well what that means; and so it is the country over. And it will probably be a long time before the people at large will be educated to any other, radically different mode of expression.

The problem now presented is that of establishing a method whereby grades assigned by one teacher can be intelligently compared with those assigned by another, and all brought to a common standard. The writer does not believe that this can be accom-

Digitized by Google

plished by forcing teachers to conform to a theoretical system, the scientific basis of which they do not understand, and which ignores those human elements of sympathy and encouragement which make teaching the noble profession that it is. On the contrary, we propose that the teacher be let alone, left to exercise her own free mode of rating; we shall show how the grades of each teacher can be easily translated into terms of a common standard (and even into terms of the probability scale, if desired) without that teacher's knowing anything about it. Indeed it were better that she should not know her own peculiarities in this respect; for let her once be conscious that she is not quite normal in the matter of grading, and she will immediately begin, though perhaps without realizing it, to "doctor" her ratings and give constrained instead of natural judgments.

Let us first examine the ordinary percentage scale of grading and the results of its use. There can be no doubt that if it were possible to estimate accurately what is called scholarship, or proficiency, and express it in units, it would be found to have in the long run the symmetrical distribution of the theoretical "error law," like shots to right and left of a target, or the statures of people above and below the average.[1] But the fact is that teachers do not, in grading, take the same attitude toward good students and poor ones. Almost without exception, they mark the poor students higher in proportion to their attainment than they do the good students, thus revealing either the element of sympathy already referred to, or some less worthy motive, as of passing along dull pupils in order to get rid of them. This tendency has been proved in two independent ways: (1) the testimony of the teachers themselves, many of whom have been questioned on this point and have almost invariably admitted being conscious of an inclination to "shove along" the poor pupil and grade him higher than he deserves; and (2) the statistical evidence based upon a study of many thousands of grades assigned by both public-school and college teachers. This latter investigation has given some very interesting results, and is the basis of our proposed method of standardizing teachers' assigned grades.

[1] See Weld, *Theory of Errors and Least Squares*, chap. iv.

Digitized by Google

The grade lists used in this study were obtained in part from college records and in larger measure from the records of the public schools of Cedar Rapids, kindly furnished by Superintendent J. J. McConnell for the purpose, over one hundred thousand individual grades being tabulated from lists assigned by about one hundred and fifty teachers over a period of several years. The public-school grades were numerical, each grade being assigned to the nearest multiple of five; for example, the grades 73, 74, 75, 76, 77 were all called 75, while 78, 79, 80, 81, 82 were called 80, etc. The college grades were literal, each having, however, a well-understood approximate numerical significance. The work of tabulation was carried out by Mr. Leslie L. Fishwild in 1915, his summarized results being as follows:

Out of over 100,000 grades, practically none were below 50.

1	per cent	were	50	13	per cent	were	80
1	"	"	55	13	"	"	85
2	"	"	60	25	"	"	90
2	"	"	65	23	"	"	95
5	"	"	70	9	"	"	100
6	"	"	75				

These results are shown graphically in Fig. 1, the unsymmetrical character of which is unmistakable evidence of the tendency to crowd poor students up the scale. Fig. 2 shows the normal probability distribution assumed to be ideal by the users of that system.

It is interesting to study in this manner the grades assigned by individual teachers, as their personal characteristics in grading are brought out very distinctly in this way. Some show much greater crowding than this average, some much less; occasionally a teacher will show very erratic tendencies; and very rarely one is found whose grade distribution is approximately symmetrical as theory would demand.

The writer has taken up the subject of this actual grade distribution as a mathematical problem, basing the theory upon certain very simple assumptions involving three separate personal characteristics of the individual teacher in grading, the result being a formula that agrees very closely with the statistical facts. It has been found in practice, however, that one of these characteristics,

Digitized by Google

viz., the range to which practically all the teachers' assigned grades are confined, undergoes little variation and can therefore be assumed as constant for all teachers, which leaves but two personal characteristics to be determined in order to find the type of marker to which the individual teacher belongs; as a mathematician

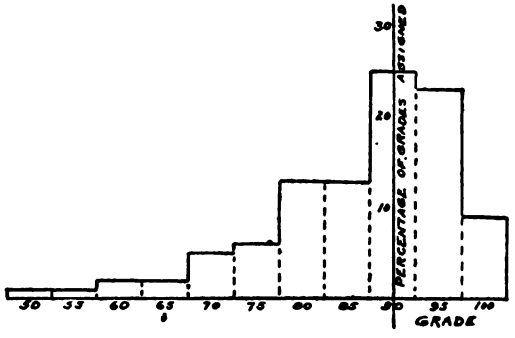


FIG. 1

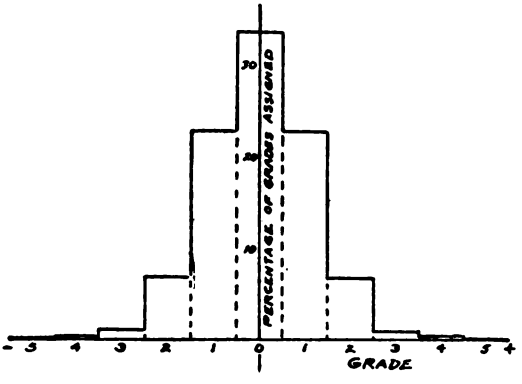


FIG. 2

would express it, only two parameters are necessary in the teachers' grade-distribution formula. This mathematical work may be published more appropriately elsewhere; but its outcome is the simple and practical method now to be presented, whereby any superintendent or principal or college registrar can determine the teacher's type of grade assignment from a single semester's grades, and be able thereafter to translate the grades given by that teacher

Digitized by Google

to a standard scale, which may be used whenever a student's actual ranking is to be determined.

For the purpose of this method the data are tabulated in a more convenient form than the foregoing. Instead of finding the percentage of a teacher's grades which are, say, 70 or 65, as in the mathematical treatment referred to, we find the percentage which are 70 *or above*, 65 *or above*, etc., and tabulate these values. It was found that of the thousands of grades examined by Mr. Fishwild, vary approximately

100	per cent	were	50	or	above	83	per cent	were	80	or	above
99	"	"	55	"	"	70	"	"	85	"	"
98	"	"	60	"	"	57	"	"	90	"	"
96	"	"	65	"	"	32	"	"	95	"	"
94	"	"	70	"	"	9	"	"	100		
89	"	"	75	"	"						

The passing grade being 75, 11 per cent of the grades denote failure.

While it would, of course, be desirable to make a selection from various localities, it is fair to presume that this distribution is not far from normal the country over, since the teachers assigning these grades were not by any means all of local origin. At any rate this distribution, even if not quite the average for the United States, will serve our purpose as a reference point and means of comparison. It is shown graphically by the heavy curve in Fig. 3, along with the corresponding curves for certain individual teachers, which are dotted.

Now the foundation principle of our method is that *we may expect any one large group of unselected pupils (as those handled by one teacher in a year) to have about the same actual scholarship, on the average, as any other similar large group.* This means that radical differences observed in the grade distribution of one teacher from that of another have their origin in the characteristic grading methods of the teachers themselves rather than in the pupils they handle. (If in any case there is reason to believe otherwise, due allowance should of course be made for the fact in applying the method.)

We may now proceed to classify teachers into types, according to their peculiar characteristics in grading. This may be done as

Digitized by Google

minutely and over as large a range as we think best, but the writer suggests the use of twenty types, consecutively numbered, of which the middle ones are nearest to the normal, or standard. It is believed that this number will suffice in practice. These types are identified, as before mentioned, by means of two simple charac-

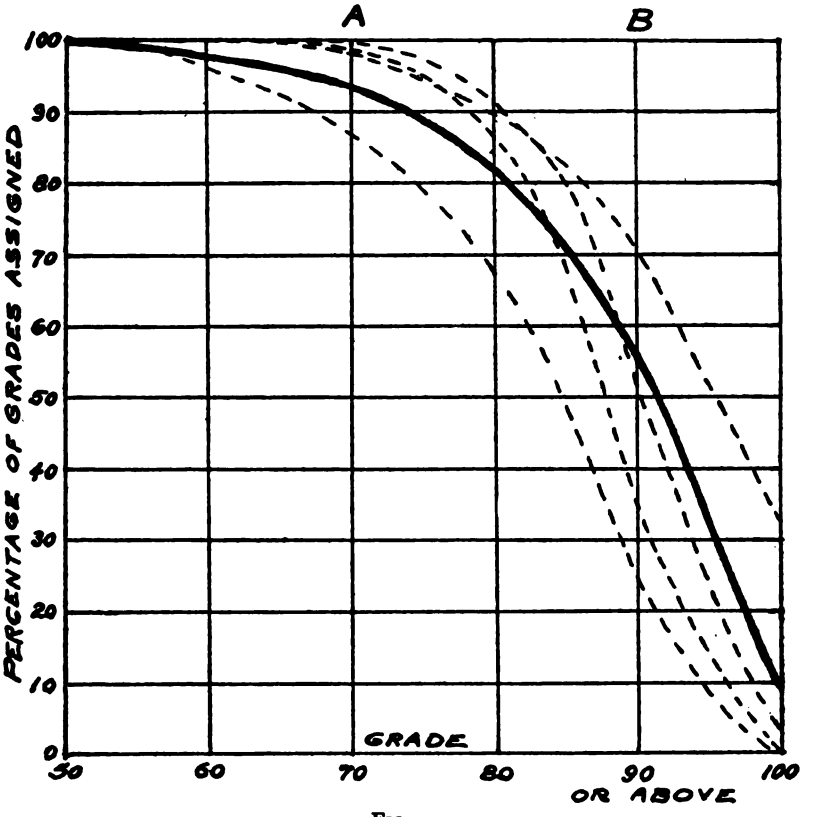


FIG. 3

teristics, for which I have selected (A) the percentage of the teacher's assigned grades that are 70 or above, and (B) the percentage that are 90 or above. (The former, A, is more important in identifying the type than the latter, B.)

For the average or standard distribution that we are using, A is 94 per cent and B is 56 per cent, which, by the way, is rather surprising when we think of it. It is an actual fact, however, that

Digitized by Google

56 per cent of all the grades examined by Mr. Fishwild were 90 or above, which exhibits more strikingly than ever the general tendency to crowd up the scale.

For individual teachers, A and B will have different sets of values, and, after considerable study of actual distributions, the twenty types shown in Table I (at end of paper) have been selected as fairly representative of the range likely to be encountered. In general the first types correspond to the consistently low markers and the last to the consistently high markers, while the middle type (11) is about normal. Provision has been made, also, for certain types that for some reason are high markers of good pupils and low markers of poor pupils, or vice versa; it is certain that such types exist. In practice a judicious combination of two types may sometimes be found satisfactory with gradual transition along the scale from one type to the other.

The next step in the development of the method was to compare the grade distributions corresponding to the respective types with the standard distribution. Familiarity with the form of the distribution curve (Fig. 3), through plotting many individual grade distributions, made it possible to trace curves with fair accuracy when only the two characteristic points at 70 and 90 were given. A number of such curves are shown dotted in Fig. 3. The grade comparison then became a simple matter. For example, it was found from the curve for Type 16 that grades of 80 or above are given by teachers of this type in about 92 per cent of their gradings, while we observe that this same percentage of the gradings of the standard marker (Type 11) are 73 or above. We may therefore conclude that the grade 80 given by a teacher of Type 16 corresponds to the grade 73 on the standard scale of marking. In a similar manner, if a teacher of Type 6 gives a pupil the grade 80, it is equivalent to 83 on the standard scale, this teacher being a low marker.

Proceeding in this manner, it has been found possible to construct an approximate table (Table II), whereby such translations may be made at a glance as soon as the type to which the teacher belongs has been decided upon. Grades intermediate between those provided for in the table can be easily interpolated.

Digitized by Google

The possession of Tables I and II, with a semester or so of grade reports from the school system, will be sufficient to enable any school superintendent or college administrator to accomplish the desired standardization and comparison. The method of procedure may be summarized, for practical use, in the form of the following directions:

1. To standardize a teacher's grading, examine a considerable number of that teacher's grades (the more the better), ascertaining (A) what percentage of them are 70 or above, and (B) what percentage are 90 or above.
2. Find from Table I the type that corresponds most nearly with these characteristics, A and B, and assign the teacher to that type (a judicious combination of types may prove satisfactory). A should have more influence than B in selecting the type.
3. The standard grade, which corresponds to any one of the teacher's assigned grades appearing in the top row of Table II, is given below it in the same column, opposite the teacher's type number.

Example: It is found that 92 per cent of the grades assigned by Miss M. are 70 or above, and 45 per cent are 90 or above. Referring to Table I, it is seen that Miss M. belongs in the neighborhood of Type 8. She is a low marker. The horizontal row opposite Type 8 in Table II now shows that Miss M.'s 50 is equivalent to a standard 54, her 55 to a standard 59, etc.

If a teacher is found whose characteristics are nowhere near being represented by any of the types, as may sometimes occur, it is evidence of some very erratic habit of grading, and more complete tabulation of the grades will be desirable. This is likely to reveal inconsistencies which can be explained only by an utter lack of system in grading or of appreciation of what grades mean; in any case that teacher will bear watching in this respect at least. Mr. Fishwild ran across two or three cases of this sort in his research. Such instances are, however, exceptional and need not interfere with the general application of the method.

The value of such information as this method furnishes need hardly be enlarged upon. An illustration is found in the problem of selecting the honor students from the members of a graduating class who have had their instruction under different groups of teachers; or again, in the investigation of complaints as to a

Digitized by Google

TABLE I

Types of Teachers

Type	A	B
	Percentage 70 or Above	Percentage 90 or Above
1	85	20
2	86	25
3	87	35
4	88	30
5	89	40
6	90	45
7	91	65
8	92	50
9	93	55
10	93	60
11	94	55
12	95	30
13	95	45
14	96	60
15	97	40
16	97	70
17	98	30
18	98	35
19	99	45
20	99	50

TABLE II

For the Translation of Grades to Standard Scale

Type of Teacher	Grade Assigned by Teacher of Given Type										
	50	55	60	65	70	75	80	85	90	95	100
1	55	65	70	74	78	83	87	92	97	100	100
2	55	65	70	74	77	82	86	91	96	99	100
3	60	65	68	73	77	82	85	90	94	98	100
4	52	58	66	72	76	81	86	91	95	98	100
5	60	65	68	72	75	80	84	89	93	97	100
6	59	64	67	72	75	80	83	88	92	97	100
7	55	60	65	70	74	77	80	83	87	94	99
8	54	59	64	68	73	77	82	86	91	96	100
9	54	59	62	67	71	76	81	85	90	95	100
10	60	63	66	68	72	76	80	84	89	94	99
11	50	55	60	65	70	75	80	85	90	95	100
12	50	50	58	63	68	75	82	88	95	100	100
13	50	55	58	63	68	74	79	85	93	98	100
14	50	54	58	62	67	73	79	84	89	94	100
15	50	55	56	59	64	72	80	87	93	98	100
16	50	55	57	59	64	69	73	79	85	92	99
17	50	53	55	58	61	70	78	87	95	100	100
18	50	53	55	58	61	71	79	86	94	99	100
19	50	53	56	57	58	64	73	82	92	98	100
20	50	51	53	54	55	63	76	84	91	97	100

Digitized by Google

teacher's grading or of the suspicion that a teacher is being too easy, etc.

It is further to be noted that the standards of grading in different schools may be compared in exactly the same manner as those of different teachers, the process being capable of considerably greater refinement because of the larger amount of data available. This might be made use of in the rating of high schools by college-entrance boards, so that, for example, a student coming from a certain high school with an average of 87 could be considered to have an average of 85 from a standard high school.

It is the purpose of the writer, as time permits, to gather data from a wider field and by their use to improve Tables I and II, so that they may attain the greatest possible accuracy and applicability. Statistics of this kind, and suggestions of educators relative to this subject, will be appreciated. Meanwhile it is hoped that the method as presented, with the accompanying tables, will be found useful.

Digitized by Google

HIGH-SCHOOL FRATERNITIES

J. G. MASTERS
Omaha Central High School

The following statistical study of high-school fraternity students' marks compared with the standing of non-fraternity students has been made to determine whether such fraternity students rank higher or lower in their work, whether the difference is measurably great, and whether the attitude of fraternity students is helped or hindered by membership in such societies.

The standings of 70 known fraternity students in the Oklahoma City High School are compared with those of the same number of non-fraternity students selected as a random sampling in each case from the Junior-Senior and Sophomore classes and the clubs (four debating clubs and the German Society in this case). Comparison is also shown with the grades made by the high school as a whole, and the number of students of the above-mentioned groups under discipline as shown in the principal's "Discipline Book" is analyzed.

The marks in use in the Oklahoma City High School are 1, 2, 3, and 4, the first being the highest and the last representing a failure. It should be noted that any average of grades that approaches a 1 is a high grade.

Collecting, assembling, and averaging the standings for the various groups, I obtained the figures in Table I.

An examination of Table I shows that the fraternity students earned far fewer 1's per student than either of the other two groups. With this in mind we should expect fraternity students to receive more 2's, but here they are about on an average with the other divisions. When it comes to the poor grades fraternity students have a much larger number in each case. All of this can be seen much more clearly in the representations of the comparative grades given in Graphs I–V.

Digitized by Google

Counting the different students in each group by years, as different students, and taking 194 in each case, we have the following comparisons:

194 club students made a total of 785 1's and 73 4's.
194 Junior-Seniors made a total of 746 1's and 136 4's.
194 fraternity students made a total of 369 1's and 333 4's.

TABLE I

AVERAGE NUMBER OF DIFFERENT GRADES PER PUPIL

Group	Standing	First-Year Subjects	Second-Year Subjects	Third-Year Subjects	Fourth-Year Subjects
Fraternity	1's	3.31	1.53	1.21	1.09
	2's	3.01	2.30	1.48	2.68
	3's	2.83	2.40	1.75	0.91
	4's	2.71	1.68	1.75	0.89
	4's repeated	0.33	0.48	0.41	0.09
	3's after a 4	0.66	0.35	0.38	0.05
Junior-Senior	1's	5.84	3.94	2.54	2.26
	2's	3.60	2.54	1.85	2.40
	3's	2.49	1.54	1.23	0.95
	4's	0.99	0.70	0.64	0.35
	4's repeated	0.06	0.03	0.16	0.07
	3's after a 4	0.23	0.23	0.30	0.00
Club	1's	5.30	3.98	3.02	2.10
	2's	2.63	1.88	1.69	1.75
	3's	1.23	0.92	0.46	0.60
	4's	0.59	0.40	0.19	0.00
	4's repeated	0.05	0.00	0.00	0.07
	3's after a 4	0.03	0.10	0.07	0.00

Put in another way the results are even more decisive, as shown in Graph VI.

TABLE II

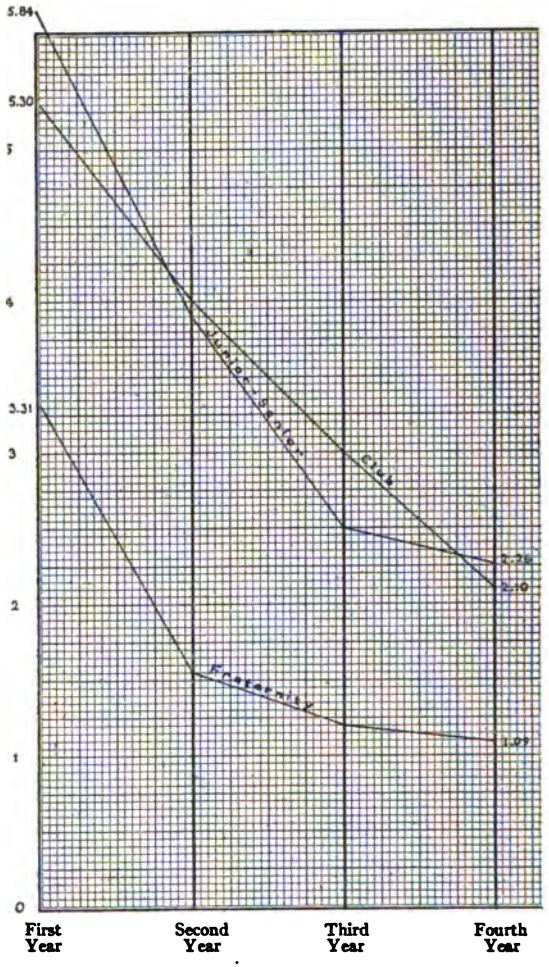
AVERAGE OF GRADES

Group	First Year	Second Year	Third Year	Fourth Year	General Average
Fraternity	2.37	2.53	2.62	2.28	2.45
Sophomore	2.15	2.27	.....	.....	2.21
Junior-Senior	1.67	1.88	2.00	1.88	1.86
Club	1.70	1.69	1.59	1.65	1.66

Calculating the averages of each group by years and the final general average I obtained the figures given in Table II.

Digitized by Google

It should be noted that the lower the number the higher the standing, and that the club students are highest generally, with



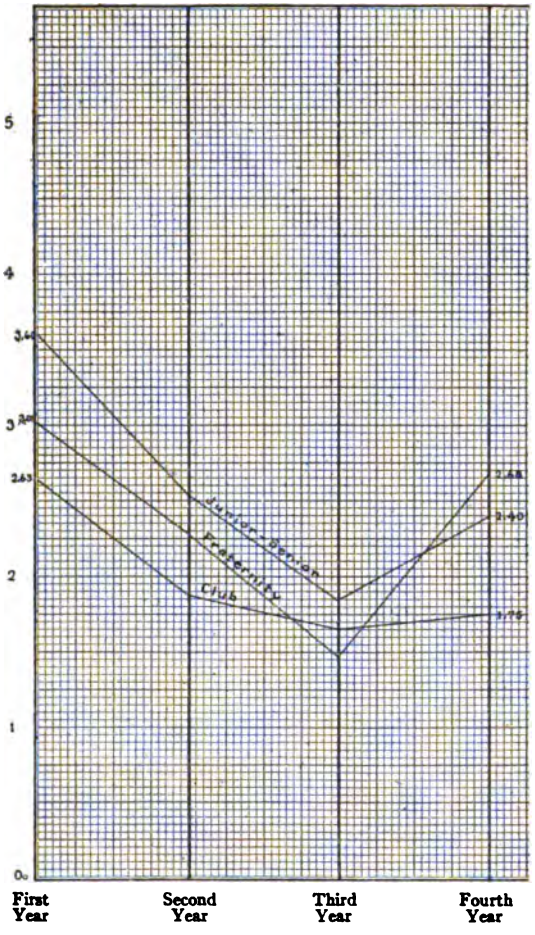
GRAPH I.—Average number of 1's made by groups through four years

the Junior-Senior group second, and even the Sophomores higher than the fraternity students.

From an estimation of all the grades of the Oklahoma City High School for the year 1912–13 the general average grade was

Digitized by Google

found to be 2.01. Comparing this average with the final averages of the above-mentioned groups, we obtain the results shown in Graph VII.

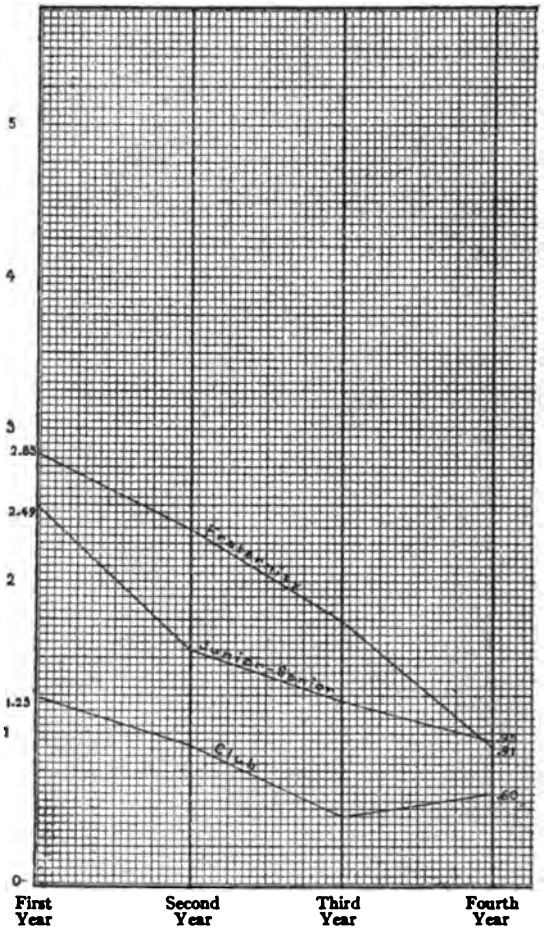


GRAPH II.—Average number of 2's made by groups through four years

It will be seen from the foregoing that in a final general average the Junior-Senior and club students average considerably higher than the school as a whole. On the other hand, the fraternity

Digitized by Google

students fall appreciably below the general standing of the school and far below the other groups.



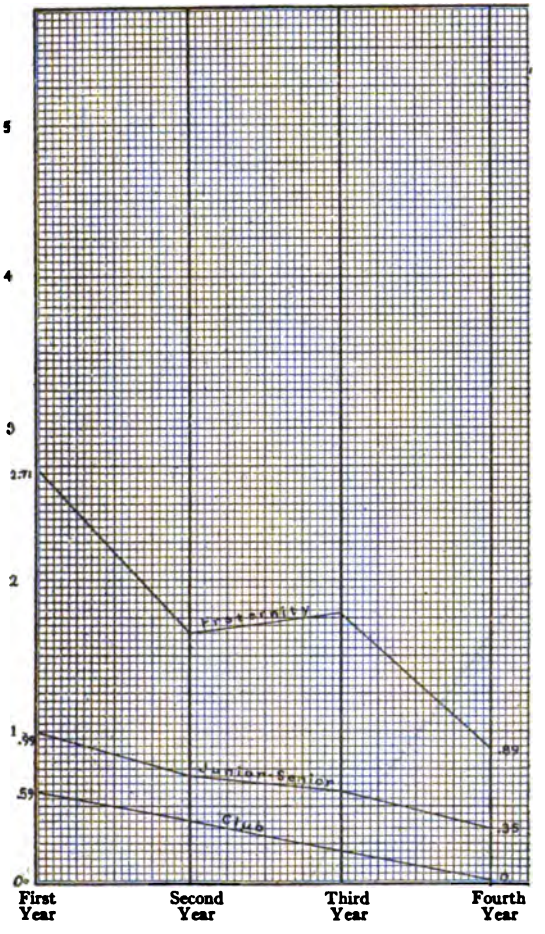
GRAPH III.—Average number of 3's made by groups through four years

Working out the medians, the highest 10 per cent, and the lowest 10 per cent, and finding the final averages of these by groups, I obtained the results shown in Table III.

The results shown in Table III are represented in another form in Graph VIII.

Digitized by Google

The medians, the highest 10 per cent, and the lowest 10 per cent, then, all reinforce what has been shown earlier by other com-

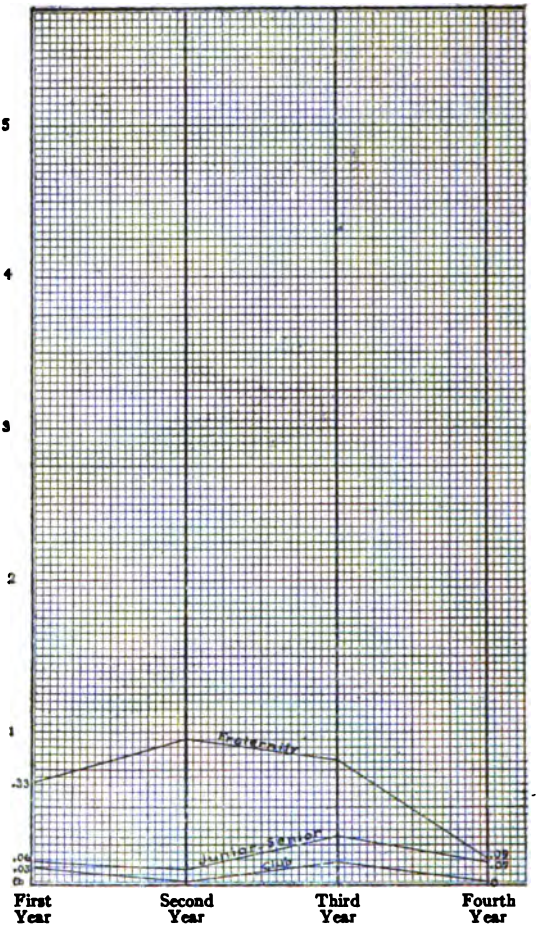


GRAPH IV.—Average number of 4's made by groups through four years

parisons, namely, that the fraternity students made poorer grades in every case, and taken from every angle their standing and scholarship are the lowest in the high school.

Turning now to the question of their attitude toward the high school as expressed in their behavior, I find that the "Discipline

Digitized by Google



GRAPH V.—Average number of 4's repeated by groups through four years

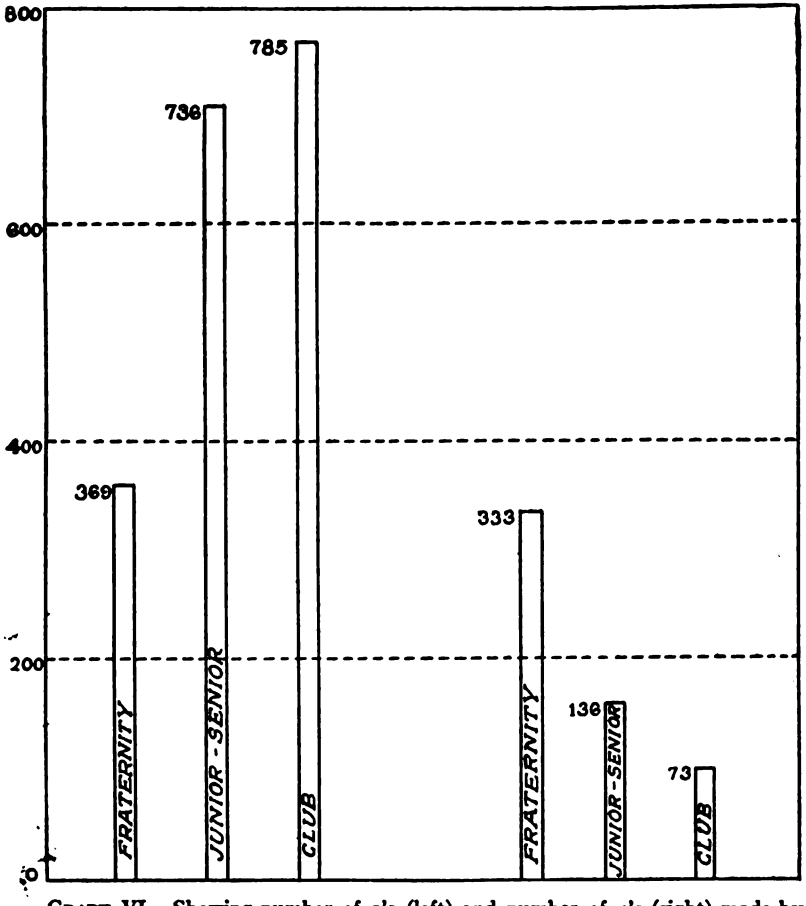
TABLE III

FINAL AVERAGES OF MEDIANS, HIGHEST 10 PER CENT, AND LOWEST 10 PER CENT

Group	Final Average of Medians	Final Average Highest 10 Per Cent	Final Average Lowest 10 Per Cent
Fraternity	2.47	1.42	3.81
Junior-Senior	1.90	1.01	3.26
Club	1.64	1.00	3.22

Digitized by Google

Book" makes an excellent contribution. This alphabetically arranged book contains a record of all students under discipline for the year 1912–13. An analysis of its contents shows the breaches in discipline made by each group. The general record



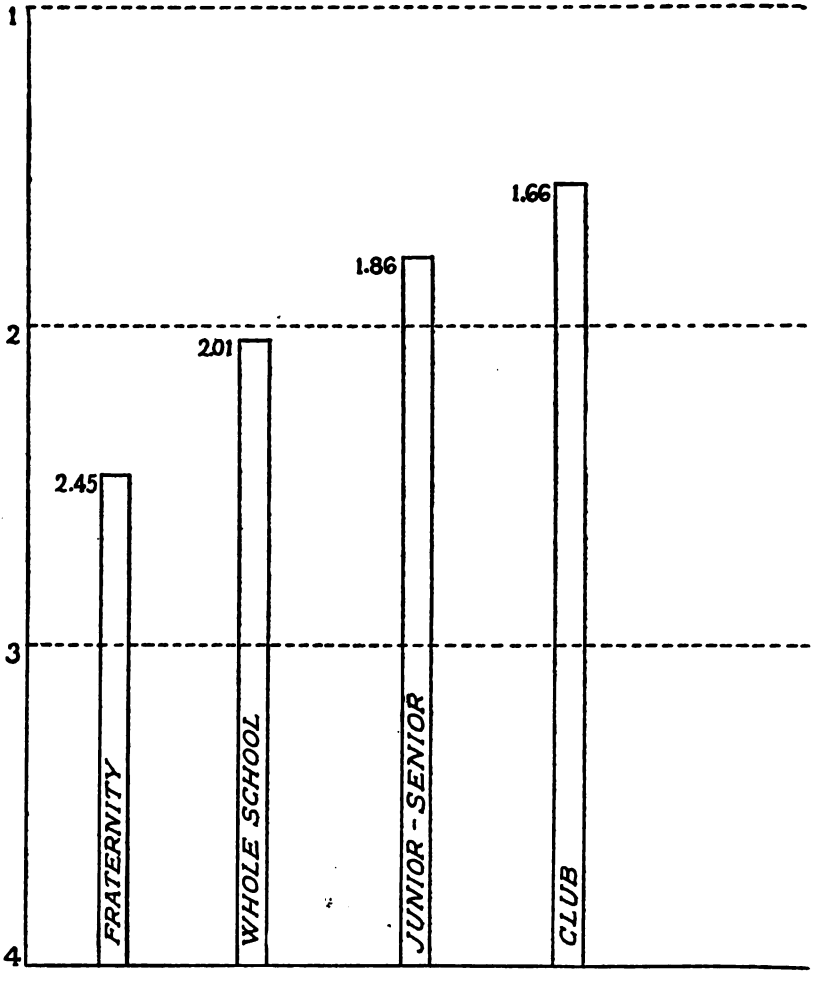
GRAPH VI.—Showing number of 1's (left) and number of 4's (right) made by three groups of 194 students each.

for the high school gives a total of 774 boys. This number less 70, the known fraternity boys, gives 704 as the total of non-fraternity boys. The count from the "Discipline Book" gives the following data:

Digitized by Google

CASES UNDER DISCIPLINE COMPARED

Cases under discipline of non-fraternity boys, 126.
Cases under discipline of fraternity boys, 38.
Average number of cases for non-fraternity boys, 0.18.
Average number of cases for fraternity boys, 0.54.



GRAPH VII.—General average attained by each group

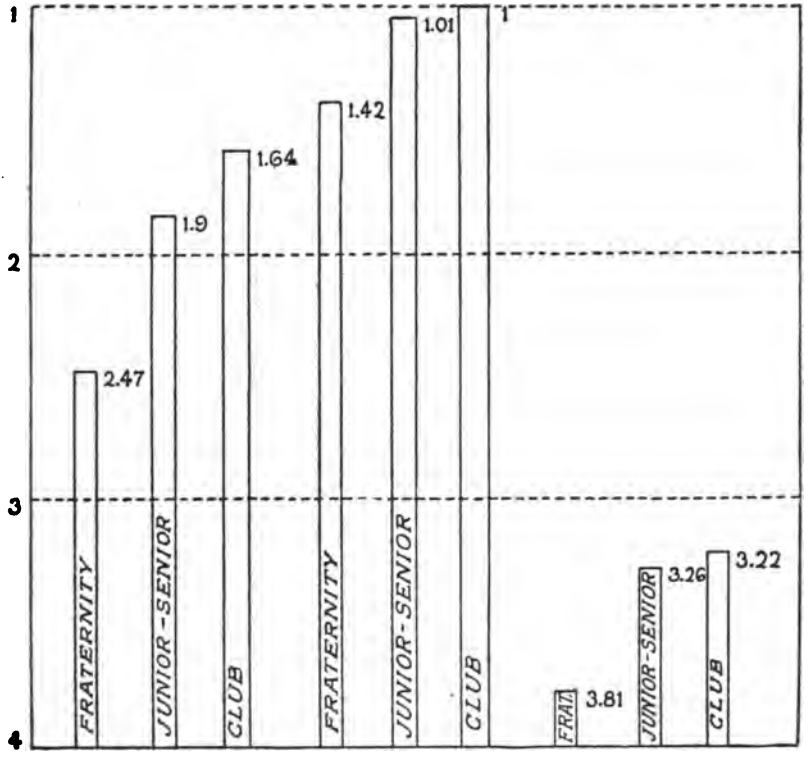
NUMBER OF BOYS UNDER DISCIPLINE COMPARED

100 non-fraternity boys committed 126 acts calling for discipline.
21 fraternity boys committed 126 acts calling for discipline.

Digitized by Google

Average each for non-fraternity boys, 1.26.
Average each for fraternity boys, 1.86.

The above presented in graphic form appears in Graph IX.



GRAPH VIII.—Averages of medians (left), highest 10 per cents (middle), and lowest 10 per cents (right).

CONCLUSIONS

The foregoing study shows conclusively:

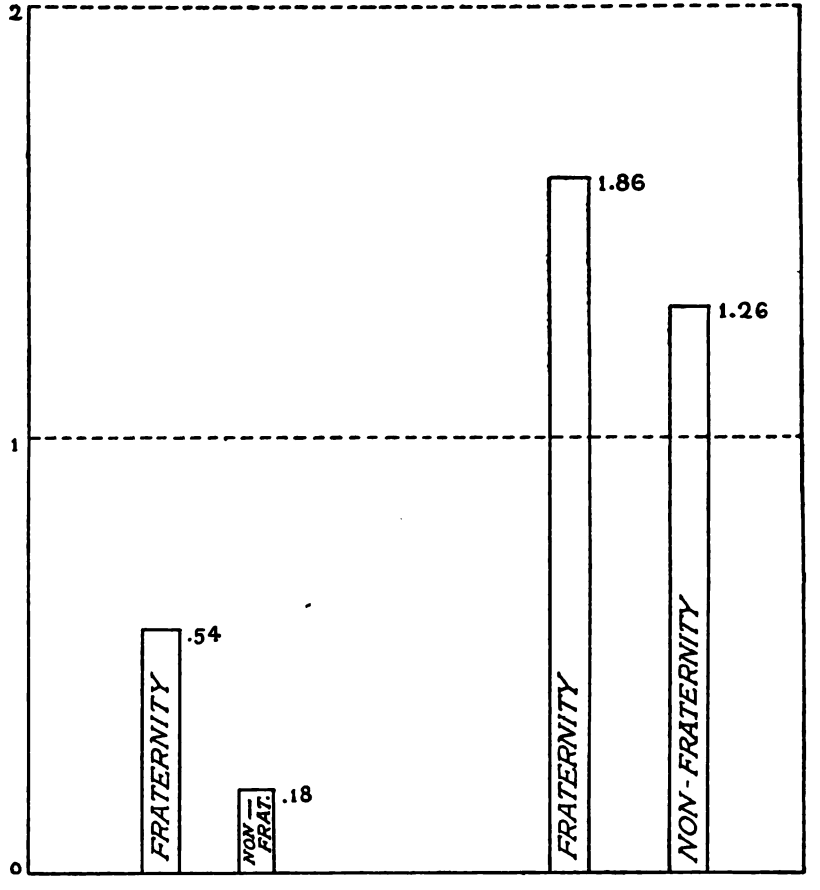
1. That fraternities discourage scholarship and retard their members in their progress through the Oklahoma City High School.

2. The disparity in scholarship between fraternity and other groups in the same high school is so great as to be a cause of concern to parents and school authorities.

3. Literary and debating clubs encourage scholarship. They should be fostered and multiplied—always under the guidance of a faculty member.

Digitized by Google

4. Membership in fraternities increases the general problems of control and discipline. It is safe to say that the fraternities encourage wrong attitudes and a spirit of disregard for the established order.



GRAPH IX.—Averages of number of cases (left) and number of boys (right) under discipline.

5. The conclusions stated above give us a basis for asserting that such secret societies should be suppressed by the most active measures, and that the school should encourage all forms of literary, language, and debating clubs as far as possible.

Digitized by Google

ADOLESCENT MORAL DELINQUENCY AND THE ATTAINMENT OF SOCIAL VALUES

F. M. GILES[1]

The purpose of this paper is to discuss the attainment by the individual of those social and moral values which give him his character and his attitude toward life as a whole. The facts indicate that in adolescence the individual goes through a rather definite process in forming his ethical standards, a process marked by a breaking up of the old, a trial and reorganization, and finally by the attainment of the standard of his group.

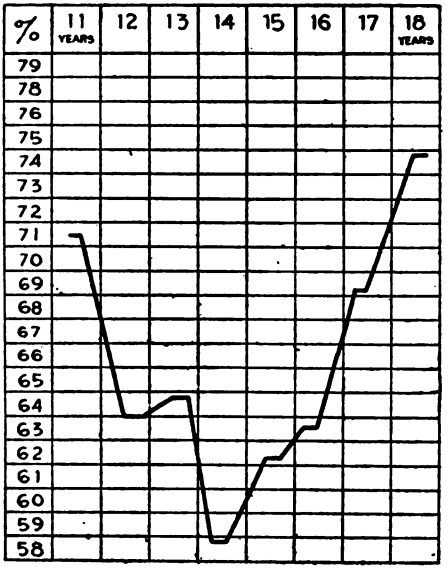


FIG. 1.—(After Marro)

There are several lines of evidence which indicate that adolescent development has the general character mentioned above. Professor Marro in his work *La Puberte* reports the following: Observations were made in Italy on the conduct of 3,012 secondary students, and the conduct of 70 per cent was reported "good" at eleven years of age, of 54 per cent at fourteen, and 74 per cent at eighteen. Plotting these figures, Professor Marro obtains a curve like that given herewith. Interpreting this curve, we note comparatively good conduct (Fig. 1) in the period immediately preceding

[1] Mr. Giles, late principal of the DeKalb Township High School, died Sept. 4, 1916.

Digitized by Google

adolescence, the period of imposed morality; a decided falling off in the character of the conduct from that time until the age of fifteen years, the period of trial; and then the beginning of a rise which does not end until a higher point is reached at the age of eighteen years than was had at eleven, this point being the attainment of control.

In order to compare these figures with those of an American high school, the writer kept, for a period of four years, a record of the students requiring discipline. The aggregate number of boys observed was 687, of girls, 767. The figures given in Tables I and II were obtained. Plotting these figures we get the curves

TABLE I

BOYS

Age	Number Observed	Number Classed as Good or Not Requiring Discipline	Percentage of Those Classed as Good
13.....	52	47	90
14.....	140	114	81
15.....	163	137	84
16.....	121	85	70
17.....	79	58	73
18.....	45	38	84
19.....	18	15	83

TABLE II

GIRLS

Age	Number Observed	Number Classed as Good or Not Requiring Discipline	Percentage of Those Classed as Good
13.....	67	64	95
14.....	179	170	94
15.....	212	196	92
16.....	170	159	93
17.....	99	85	85
18.....	24	22	91
19.....	7	7	100

of Figs. 2 and 3, which we note to be in general the same as Professor Marro's, although in most cases we should probably have to

Digitized by Google

allow about two years for the later development in this country as compared with Italy.

I think that from these statistics we may assume an analogous development for many individuals. We may outline this development as follows: fairly good conduct in the lull preceding adolescence because of undeveloped powers; then, at adolescence, a breaking away from restraint, and a trying out of the new-felt

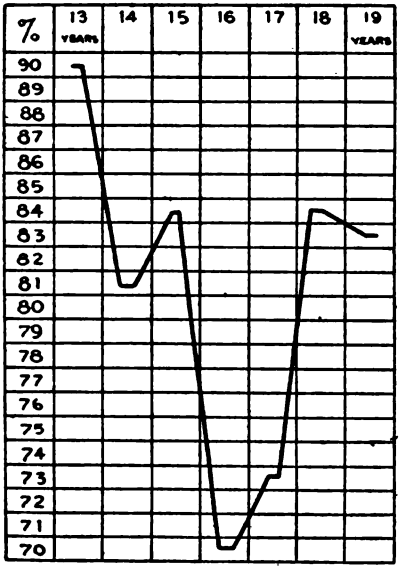


FIG. 2.—Curve based on observations in the DeKalb Township High School. Percentages are of those classed as "good."

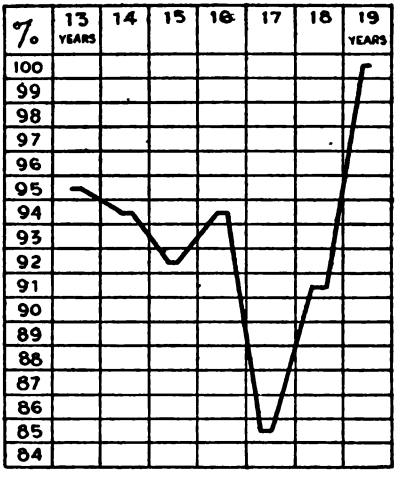


FIG. 3.—Curve showing observations on high-school girls for four years. At each age the number of girls was taken and the number not requiring discipline.

powers in many new directions and combinations. But as the consequences of the acts develop and their meaning becomes clear, the evil acts, one by one, are given up or reformed. Thus, as time goes on, a larger and larger part of the individual's life becomes moralized, and a larger and larger proportion of his acts are classed by observers as "good," until we find that at eighteen he has raised his moral standards approximately to those of the group of which he is a member. And the standard reached is not only

Digitized by Google

nearer that of the society about him than that which he had attained at twelve years of age, but is also more real, because it has been worked out through experience. It is no longer a formal, but a voluntary, acceptance of certain boundaries within which his life must go. The adolescent has passed out of the Garden of Eden through eating of the fruit of knowledge and has become one of us, knowing good and evil.

On the other hand, we find some individuals of the type who, because they live in a community of low ideals where evil acts are approved, or because even in a higher community they fail to respond to social pressure, form their lives on a low standard. These latter persist in evil actions that the group disapproves of, and try to avoid the consequences of them by deceit, concealment, or force. Such individuals take a standard for life below the community level. From the point of view of society they are the moral failures. In other words, the period of trial is also a period for making delinquents. If the result of the period of trial is immoral, we have the confirmed criminal formed. Yet it seems that in a normal environment, with a careful attention to discipline and guidance, practically all individuals are brought to the social standard.

This assumption of an analogous development for individuals, drawn from Professor Marro's statistics, is borne out by observations in several directions. In the lower years of high school there is a larger amount of spontaneous disorder, unprepared lessons, truancy, etc., than in the later years. Yet the disorder is of a temporary character and usually easily handled; and in most cases the individuals reported become manly, dependable students. That is, the "immorality" was but a temporary phase in their development. On the other hand, when boys in the later years are reported for similar delinquencies, it too frequently means that there is a settled attitude toward unsocial conduct, that is very difficult to eradicate. The individual has developed an unsocial view of life that makes him an evil influence in the school.

Juvenile delinquency furnishes further material which throws light on the growth of character. As is well known, delinquency, according to the statistics of the United States census, increases

Digitized by Google

threefold in the period from eleven to fifteen years of age, and then again decreases rapidly. The figures are 466 cases at ten years of age, 2,150 cases at fourteen, and 309 cases at nineteen. In *Man and Abnormal Man, Including a Study of Children* (Government Printing Office, 1905), Mr. MacDonald gives the proportion of criminals per 1,000,000 of the population as follows:

TABLE III

Under 12 years old	24
12 to 16 " "	261
16 to 21 " "	321
21 to 30 " "	245
30 to 40 " "	204
40 to 50 " "	143
50 to 60 " "	92
Over 60 " "	56

This places the largest proportion of criminals in the years 16 to 21. Further, the number of delinquents sent to reform and industrial schools is largest among boys and girls fourteen and fifteen years old and decreases from that age very rapidly.

The census of 1890 (p. 569, in a report on "Juvenile Crime") shows the following summary:

Truancy greatest at thirteen years of age—run away from authority.
Incorrigibility greatest at fourteen years of age—rebel at authority.
Petit larceny greatest at fifteen years of age.
Larceny, Burglary, Intoxication } greatest at sixteen years of age.
Fornication greatest at seventeen years of age.

In the same census (p. 566) is found Table IV showing the distribution of ages in juvenile reformatories of the United States.

In the report of the International Congress on Hygiene, Sikorski gives the types of children difficult to handle, and in Table V shows the percentage of those requiring discipline at different ages.

Sikorski says that the greatest number of these difficult children are found between the ages of thirteen and sixteen. "After seventeen years almost all bad subjects correct themselves."

Digitized by Google

Pointing in the same direction as the facts given above are the reports of a number of parents that, in each case, their boy was "so good" until about eleven or twelve years old—stayed in eve-

TABLE IV

Age	Male	Female
7 years	63	27
8 "	143	59
9 "	260	78
10 "	466	116
11 "	265	127
12 "	1,182	189
13 "	1,478	290
14 "	1,769	381
15 "	1,751	466
16 "	1,626	543
17 "	921	480
18 "	420	234
19 "	213	96
20 "	103	57
21 "	25	15

nings, studied his lessons, ran errands, etc.—but now, when fourteen or fifteen, they can do so little with him; he is unruly, irresponsible, and shiftless. Yet these boys later worked out a manly moral standard for their lives.

TABLE V

Years of Age	Percentage
11½	2.5
12	6.1
13	23.7
14	20.0
15	21.0
16	6.2
17	1.2

As is well known, owners of shops in which careful and exact work is required are loath to employ boys between fourteen and sixteen years of age, because in this period they are careless and indifferent toward their work. This attitude in boys and the change later on would be explained by the theory of break-up given above. And this break-up comes sharply to the front when the conditions in the home or surroundings are lax.

Digitized by Google

The smaller number of girls going through this period of trying out needs some comment. The less trying out found among girls would indicate that they do less exploring morally than boys. They accept the standards of society more readily. This may be because society holds them more strictly to account for any deviation from social standards—even minor ones—and visits a heavier punishment upon them, so that long submission has produced less tendency to try out; or it may be that woman is less given to variation than man—morally as well as physically—is more given to upholding the accepted rights and traditions than man. Her morality is thus more conventional and less a matter of experience and trial. Thus we should expect to find it less secure in some ways than man's. And statistics seem to indicate this; for we find the percentage of women criminals per 1,000,000 of the population increases up to sixty years. And in Italy the period of the greatest number of females is ten years later than that of men.

So much for the trial period of adolescence. A most important fact for the changed attitude later in adolescence comes from the study of adolescent conversion. The statistics collected by Starbuck and Coe show the well-known fact that sixteen and four-tenths years is the age of the greatest number of conversions. Does this fact not reinforce the figures of Marro, and—allowing a year or thereabouts for the earlier maturity of Italian youth—does it not indicate a change in the life of adolescents in general about this time, and their readiness to remodel their lives on the basis of the society about them, thus, in a religious atmosphere, to take the religious viewpoint as a guide for life? This change marks a new attitude toward life. No longer is the adolescent an explorer charting unknown seas, or an Ishmaelite, his hand against established convention; he has accepted definite standards for his life and will give them a trying out before he breaks away again. And as the fixity of habit settles down upon him and responsibilities increase, the chances are less and less that he will break away.

An important inference from the point of view of discipline and government in the home and school is that an unsocial action has a very different meaning for the observer and therefore should be handled differently according as it occurs in the period previous

Digitized by Google

to sixteen years of age or subsequent to it. In the former case it nearly always is simply an isolated trying out of a course of action because it seems attractive; the act is not a part of a scheme of life, and there is not much thought of results. When the consequences are pointed out, and social pressure is brought to bear, there is usually a ready abandonment of the attitude. In the latter period of adolescence unsocial action too often means, not the spontaneous carelessness of earlier years, but either a failure of the individual to conform his life to fairly well-known standards—that is, weakness on his part—or a more or less settled unsocial attitude toward life taken in the belief that such an attitude is the

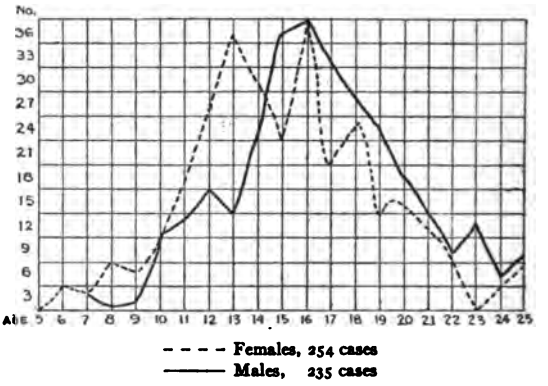


FIG. 4.—Curve showing age of conversion. (After Starbuck, *Psychology of Religion*.)

clever, pleasurable, or advantageous thing to do. There has been a fixing of the ideals along unsocial lines. Under such conditions one will have to work long and patiently either to establish a better control or to break up the unsocial attitude; for the individual will slip back under temptation or whenever he thinks he can escape detection.

There is, in this law of adolescent moral development, this further note of encouragement for those parents who are alarmed and apprehensive over the loss of moral tone in their boys and girls during the early period of adolescence, namely, that the attitude is a temporary one and will, with proper training and surroundings,

Digitized by Google

work off, and the individual will come to himself and to the standards of his group. At the same time the other aspect of the process is to be remembered, that the period is an exceedingly critical one for the individual, for he is working out the standards by which he is to guide his life for the years to come, and there is the possibility that he may, in the strife of truth and falsehood, choose the evil side. Thus every care and endeavor should be used to bring about the choice of the desired standards. For the choice once made is in all probability final.

The problem of the first period of adolescence is one of trial and discovery; the essential problem of the second period is one of control of the newly discovered self, and this problem often lasts until well on into mature life, and in some cases is not solved at all. After the adolescent has found out his talents, his likes, and his possibilities, his test, so far as manhood is concerned, has really just begun. The problem hitherto has been one of seeking new activities, enjoying them, and measuring himself in them. And the danger is that the individual will continue unstable and a seeker for pleasure; will, in other words, make pleasure the end of his planning. The real test now is, having measured himself somewhat and having some realization of an ideal to which he would aspire, can he bring himself under control and make real this ideal? To do this he must change from feeling to intellect as the guide of life. The statistics of social hygiene and dissipation show either the low ideals prevailing, or extreme lack of control among the young manhood of the nation. The youth should be taught that the test of himself, after having "felt the bite of full-bodied desire," is whether he can live up to an ideal of clean, hardy manhood, and that the test of our nation is whether we can make this ideal prevail. This is the problem of moral education in adolescence.

Schematically, then, the progress in the development of the individual during adolescence is as follows: There is a lull physically in the years immediately preceding adolescence, with fairly good conduct; but with the increase in strength and the impulsion of new-felt powers—mental and physical—the growth of sex, etc., there comes a general revolt against restraint. In this period so

Digitized by Google

much of the petty stealing, truancy, etc., occurs. And here is the critical period which lasts until moral values are established. Then there is a division into two groups: the class which solves the problem of control and organizes life on social lines, and another class the members of which for reasons of environment or heredity follow the path of desire, delinquency, and crime. We may say summarily that the problem of education in the adolescent period is to provide an environment wherein the individual can find sufficient freedom to try out his social impulses, and yet an environment so organized that he shall not take a distinctly unsocial or immoral combination of them. The aim of the parent should be to keep the suggestions of the home life and the associates of such a character that the solution is the one socially desired. The meaning to the individual of this period of trial and choice is to make the character which is finally worked out the result of real effort and personal choice. Only so could a character be developed. Finally the period has a racial meaning as well, in that it offers opportunity for the variation that makes changes in established custom possible.

BIBLIOGRAPHY

Census of 1890, Statistics on "Juvenile Crime," p. 569.

Census of 1890, Statistics on "Juvenile Delinquents," p. 566.

Chamberlain, A.F., *The Child* (see chapter on "The Child and the Criminal").

Clouston, T. S., *The Neurosis of Development* ("The Adolescent from the Medical Side").

Coe, George A., "Morbid Conscience of Adolescence," *Transactions of the Society of Illinois for Child Study*, III, 2.

Dawson, *A Study of Youthful Degeneracy*, Pedagogical Seminary, 1896.

Duprat, G. L., *La Criminalité dans L'adolescence.*

Hall, G. S., *Adolescence.*

Key, *Pubertätsentwickelungen und Krankheitserscheinungen.*

Laurent, *La Criminalité infantile* ("Observations of a French School Officer").

MacDonald, Arthur, *Man and Abnormal Man—Including a Study of Children* (Government Printing Office, 1905), p. 452.

MacDonald, Arthur, "Juvenile Crime and Reformation," in report to Committee of House of Representatives, 1908.

Marro, Antoine, *La Puberte.*

Morrison, William D., *The Juvenile Offender.*

Digitized by Google

Russell Sage Foundation publications, "Boyhood and Lawlessness," "The Neglected Girl."

Sikorski, J., "Children Whose Education is Difficult," in report of International Congress on Hygiene, 1883.

Smith, F. W., "The High School and the Adolescent," *Journal of Pedagogy*, 1904.

Starbuck, *The Psychology of Conversion.*

Stewart, A. H., *American Bad Boys in the Making.*

Swift, "Criminal Tendencies of Boyhood," Pedagogical Seminary, 1901.

Wille, *Die Psychosen des Pubertätsalter.*

Wilson, Albert, M.D., *Education, Personality and Crime* (treats of crime from a physiological and multiple personality standpoint).

Digitized by Google

EDUCATIONAL NEWS AND EDITORIAL COMMENT

A Transition Stage in Chicago School Control

The public schools of Chicago are passing through a critical period of reorganization. For several years there has been a bitter controversy on between the Board of Education and the Teachers' Federation. In this controversy the enemies of affiliation of teachers' organizations with labor unions won a victory through a decision of the Supreme Court of Illinois holding that the Board of Education can legally make rules prohibiting membership of teachers in labor unions. The critics of the present organization won a victory in the form of a new law reducing the number of members on the Board and otherwise changing the system, especially through the statutory definition of the rights and duties of the superintendent and business manager.

The way is open for a new kind of organization. The Teachers' Federation has accepted the decision and has withdrawn from its affiliations with labor unions. This will be followed, it is promised, by a vigorous policy of professional activity. The better training of teachers, the more intelligent and professional study of the problems of modern school organization, the more precise definition of teaching efficiency, are problems to which the Federation will give much more attention than in the past.

There is to be a new Board, made up of strong, independent citizens who will set aside the old controversy and organize a school system which shall be second to none in perfection of organization and in breadth and quality of instruction.

The last paragraph is a prophecy, not a statement of actual achievement. Those who have been most interested in seeing Chicago schools advance have been in the habit in recent years of offering each other the melancholy advice that everybody must be patient because matters would have to get so bad that improvement would be demanded by everyone. These downcast friends of the schools did not hope for sudden reform. They did not, however, include in their calculations Mayor Thompson. With an obliquity of vision which has come to be recognized as characteristic, he nominated for the new Board a group

Digitized by Google

of people who brought at one stroke that condition which was so bad that everybody was aghast. Mr. Jacob Loeb, the president of the Board, in a dramatic statement recounted to the Board at a special meeting the efforts of the Mayor to take over the schools for complete domination by the City Hall. There was a protest from the whole city.

As the *Review* goes to press, the matter rests with the City Council, which has the power to reject the Mayor's nominations, and with the old Board, which, under the new law, holds over until the new eleven members are ratified. What the Council will do will not be known until after June 1. Let it be hoped that it will make the shortest work possible of the Mayor and his kind. The old Board is beginning to reorganize in the spirit of the prophetic paragraph above. The Board is taking its duties of appointing heads of the schools seriously and is seeking information and expert advice.

It looks as though the Mayor of Chicago had unwittingly done the schools a great service by attempting one of the few things which an American community is absolutely certain to refuse to tolerate. Chicago will not allow its schools to become the victim of a low, selfish system of spoliation.

The future of the Chicago schools looks brighter today than it has for a long time.

C.H.J.

The Portland Meeting

The annual meeting of the National Education Association will be held in Portland, Oregon, July 7–14. The new Municipal Auditorium of the city assures the convention of an ideal meeting-place, and the unrivaled natural beauties of the state furnish unusual attractions. The two-million-dollar Columbia River Highway is one of the great scenic drives of the world. Concerning the program the secretary sends out this interesting announcement:

Ideas around which the program of the general session center are preparedness, nationalism, and patriotism. Speakers representing various phases of the educational work will show particular types of training tending to the development of these fundamental virtues. The Department of Secondary Education will present the following topics and speakers: "The Intermediate School or Junior High School," Superintendent A. C. Barker, Oakland, Cal.; "The Junior College or the Six-Four-Four Plan," Superintendent Frazier, Everett, Wash.; "The Evening High School, Its Needs and Possibilities," Assistant Superintendent W. M. Osbourn, Tacoma, Wash.; "Conservation of

Digitized by Google

the Teacher," Professor C. E. Rugh, University of California; "Conservation of the Pupil," Principal George C. Jensen, Elco, Nev.; "The Girl Problem in the High School," Elizabeth Rowell, adviser of girls, Broadway High School, Seattle, Wash.; "The Responsibility of the High School for American Ideals," President A. H. Reinhardt, Mills College, Oakland, Cal.

The Department of Registration and Education

Reorganization of the administrative work of the state of Illinois is to go into effect on July 1, 1917. It includes nine departments, one of which is the Department of Registration and Education. Dr. Francis W. Shepardson, recently associate professor of American history in the University of Chicago, has been appointed by Governor Lowden as director of this department. Under Mr. Shepardson's direction will be included the work of registration now covered by a number of separate boards of examiners, of medicine, of pharmacy, and the like. The educational feature of the new department's activities will cover the general supervision of five state normal schools, of the State Geological Survey, the State Museum of Natural History, and certain scientific investigations in botany and bacteriology and the like, now conducted by agents of the state.

Character Education

The *School Review* is glad to publish the following item, believing that the National Institution for Moral Instruction has unbounded possibilities for good:

The National Institution for Moral Instruction, Headquarters Study, 3730 McKinley Street, District of Columbia, wishes to furnish a means of publicity and consultation for all professional educators who are doing advance work in character education. A collection of exhibit material is being made, containing books, circulars, lesson material, social-organization and character-training plans, articles and typewritten statements, which will be shown in "consultation rooms" on character education at meetings of the National Education Association and at state associations. Anyone is privileged to show advance material in this exhibit, but nothing will be included merely for advertising. The National Institution for Moral Instruction is for research in this neglected field of education and wishes to assist and recognize with honors all who are making progress possible in character education. Those active in original work are invited to enrol as "Corresponding Associates."

Milton Fairchild

Digitized by Google

The School Nurse

In many communities attention to the health of the school children means a hasty physical examination by a very busy physician of a thousand or more children just before the opening of school. The health certificate issued means little because it covers contagious diseases only. Some communities have gone a step farther and have employed a visiting nurse; but again conservatism stands in the way. The community, half-convinced, employs one nurse for 40,000 children. "The Report of the Present Status of School Health Work in the 100 Largest Cities of the United States," published in the March number of the *American Journal of School Hygiene*, indicates continued unawareness in cities in which need of medical supervision is evidently great. On the whole, the report shows increased concern for child welfare and scientific provision for preventive measures.

Perhaps the chief factor responsible for the introduction of the school nurse into the schoolroom has been the perennial inability of the inspectors to secure corrective action on the part of the home with reference to any defects discovered. Dr. Hayward, an English doctor, says:

> As a doctor I felt quite stunned in the strange atmosphere of an elementary school, coming into contact, not so much with actual illness, as with the primary conditions which produce and foster it. Dirt, neglect, improper feeding, malnutrition, insufficient clothing, suppurating ears, defective sight, the impossibility of getting adequate information from the children; and nobody to whom one could give directions or who could help in examining the children. My entries began and ceased with endless notifications.

The records kept by large American cities show that the addition of the school nurse has increased by many hundred per cent the tendency on the part of the home to follow the advice of the examiners; for the office of the school nurse lies, not only in a careful oversight of general conditions of health of the school children, but more particularly in a kind of "follow-up work" which takes her into the homes of her district. During the year 1915 the Chicago staff of nurses was responsible for 13,214 minor operations for tonsils, adenoids, and the like, and was instrumental in securing treatment at dispensaries or by private physicians, dentists, opticians, or through charities, of 21,706 cases.

On November 1, 1916, Mr. Laurence A. Averill sent a questionnaire to the superintendents of 121 cities having a population upward of 50,000, inquiring the school enrolment, the presence of a school physician,

Digitized by Google

school nurses, and school clinics. Exactly 100 answers were received. The cities replying to the questionnaire were arranged in four groups, the first including the largest cities with the exception of New York, which was considered in the January issue of the *Journal of School Hygiene*. Boston and Chicago stand in the foreground, though they leave much to be desired. Boston shows a school population of 110,938 with 38 nurses, averaging 3,000 pupils per nurse; Chicago, 450,000 children with 150 nurses, making the same average of children per nurse. In the second group Kansas City (Missouri) distinguishes herself by recording a school population of 46,000 with no nurse. Minneapolis, on the other hand, shows a school population of 43,083 with 29 nurses, averaging 1,500 pupils per nurse—a provision quite adequate. Of the cities in the third group, Trenton makes the best provision, Worcester the least. The cities of the least population are likewise least alive to the need of medical supervision. The suggestions in the final paragraph of the report are significant for this class of city and for towns and rural communities:

> As we have pointed out above, there are certain classes of defects among pupils which can only be successfully diagnosed by the physician, and thus the medical expert remains essential in the most successful administration of comprehensive school health. Still, in innumerable of our smaller cities, and in towns, the future health worker is likely to be the nurse almost exclusively. The number of serious organic defects found among the pupils of smaller cities and towns are naturally smaller, and can easily be referred to some local physician. Thus, in whichever direction we turn, the future sphere of the school nurse becomes more and more inclusive.

THE BOOKLIST

At this time of the year superintendents are planning for next year's equipment. With the pressure more insistent from other directions, the library is likely to receive a scant allowance in spite of the fact that the inculcation of scholarly methods of study depends rather largely upon the supply of reference material. A good many who are hampered by small means regard the encyclopedia and the dictionary as the only available works of this type within their resources. These persons are apparently unaware of the long list of carefully prepared public documents to be had for very slight expenditure. To facilitate the distribution the *Booklist*, edited by the American Library Association, once in two months issues a selection of public documents particularly useful for the small library. The current issue, for instance, lists subjects ranging from the "Minnesota Survey," published by the United Labor

Digitized by Google

Subjects Selected by Students in the High Schools of Oregon, 1916–17

For the purpose of determining somewhat the trend of education through the high schools of Oregon, this department sent a request to all its standard high schools for a schedule of subjects of each pupil in the high school. The information was received from 165 of the 175 high schools of the state. The information as tabulated is here given. Sixty-one high schools in the state are offering a course in domestic science and domestic art; 59 are offering a course in manual training; and 7 are offering a course in agriculture.

Grades	Students			Subjects													
	Boys	Girls	Total	English	Mathematics	Science	History	Latin	German	Manual Training	Domestic Science and Art	Stenography	Agriculture	Teachers' Training	Elementary Teachers' Training	Spanish	French
Freshman	3,140	3,990	7,130	6,215	5,607	2,907	2,456	1,051	765	1,055	1,531	439	144	....	.....	180	43
Sophomore	2,379	2,955	5,334	4,967	4,641	2,176	2,321	1,159	902	743	1,087	678	68	6	6	231	61
Junior	1,206	2,419	3,625	3,388	2,198	1,899	1,866	657	732	400	563	808	104	142	41	138	48
Senior	1,290	1,874	3,164	2,411	1,054	1,547	1,924	311	463	221	426	529	97	622	17	101	21
Post Graduate and Special	124	480	604	95	103	69	64	12	19	19	195	84	1	90	.....	4	2
Total	8,139	11,718	19,857	17,076	13,603	8,661	8,631	3,190	2,881	2,438	3,802	2,538	414	860	64	654	175

J. A. Churchill
State Superintendent of Public Instruction

Digitized by Google

Statistics Bureau, to the "Small Vegetable Garden," issued by the Plant Industry Bureau.

The *Booklist* had its beginning in lists of current books issued by the Wisconsin Free Library Commission, at first for Wisconsin libraries and later for other state commissions. It is by no means an advertising scheme. The books included have been carefully chosen for the guidance of librarians, and the explanatory notes indicate clearly the nature and scope of each work. Copies of the *Booklist* are to be found in most public libraries. The public-document section offers a carefully annotated list most likely to be useful to the limited library. Almost all of the public documents are to be had free of charge if obtained through one's congressman.

Salaries of High-School Teachers

The *School Review* is indebted to Mr. J. M. McConnel, of Northwestern High School, Detroit, for permission to print a portion of the data collected by him for the Indianapolis High-School Teachers' Association. He canvassed the 100 cities having a population of over 50,000, to ascertain the annual average salary of high-school teachers, not including principals, for the year 1916–17. Seventy-five cities replied. Mr. McConnel's tabulation and comments on the results are as follows:

1. New York	$2,187	10. Cincinnati	$1,550
2. Newark	1,798	11. Oakland	1,543
3. Jersey City	1,794	12. Savannah	1,523
4. Philadelphia	1,696	13. Columbus, O.	1,522
5. Pittsburgh	1,692	14. Seattle	1,501
6. Washington	1,650	15. Cleveland	1,501
7. St. Louis	1,620	16. Minneapolis	1,479
8. Yonkers	1,556	17. Denver	1,462
9. Youngstown	1,553	18. Fort Wayne	1,437
19. Milwaukee	$1,437		
20. St. Paul	$1,425	29. Rochester	$1,298
21. Spokane	1,408	30. New Bedford	1,291
22. Toledo	1,399	31. Cambridge	1,286
23. Detroit	1,389	32. Patterson	1,278
24. Baltimore	1,382	33. Providence	1,266
25. Portland, Ore.	1,339	34. Kansas City, Mo.	1,265
26. Grand Rapids	1,337	35. Tacoma	1,263
27. Buffalo	1,333	36. Scranton	1,261
28. New Haven	1,328	37. Worcester	1,261
38. Salt Lake City	$1,250		

Digitized by Google

39. Lynn	$1,240	48. South Bend	$1,190
40. Holyoke	1,237	49. Omaha	1,175
41. Syracuse	1,233	50. Fall River	1,168
42. Louisville	1,230	51. Duluth	1,167
43. Springfield, Mass.	1,215	52. Bridgeport	1,166
44. Reading	1,206	53. Kansas City, Kans.	1,162
45. Harrisburg	1,200	54. Indianapolis	1,144
46. Waterbury	1,200	55. Elizabeth	1,143
47. Hartford	1,198	56. Atlanta	1,142
57. St. Joseph, Mo.	$1,134		
58. New Orleans	$1,125	67. Wilkes Barre	$1,032
59. Des Moines	1,123	68. Houston	1,022
60. Troy	1,112	69. Portland, Me.	1,019
61. Camden	1,111	70. Albany	1,009
62. San Antonio	1,067	71. Fort Worth	993
63. Schenectady	1,060	72. Oklahoma City	969
64. Somerville	1,054	73. Richmond, Va.	817
65. Johnstown	1,046	74. Birmingham	781
66. Wilmington	1,038	75. Memphis	736

Here are given the average annual salaries for 1916–17 as reported from these 75 cities. They are placed in descending order, and the quartile arrangement is used. The range is from $2,187 in New York City down to $736 in Memphis. The median salary is $1,250, Salt Lake City. In looking at the table we see that 25 per cent of the cities pay an average salary of $1,437 or more, and that 25 per cent pay $1,134 or less; 50 per cent of the cities pay salaries that fall between these two limits, giving a range of practically $300.

In general, there is a fair correlation between size of city and salary paid. Looking at the cities in the first quartile, we see that most of them would be in the first quartile of a table arranged on the basis of population. This correlation, however, is violently broken in numerous cases. For example, Yonkers and Youngstown are found in the upper quartile of salaries and are relatively small cities. Likewise, Indianapolis and New Orleans are in the third and fourth quartiles of salaries, while in population they are in the first quartile.

Some facts as to salaries paid in various sections of the country are shown by a study of the table. Of the 10 cities paying the highest salaries, all but one, St. Louis, are east of the Mississippi River. On the other hand, some of the smaller eastern cities pay extremely low salaries—for instance, Schenectady, Somerville, and Wilmington. The western cities are not found on either extreme, but are fairly well scattered through the upper 50 per cent. Of the 10 cities paying the lowest

Digitized by Google

salaries, 6 are southern cities. In only 1 southern city, Savannah, is the average salary above the median.

Not only is it important to know the salary paid, but it is also important to know the tendency of that salary to increase or decrease and also the rate. The attempt was made to get data from all the cities on salaries paid in 1906–7 and 1911–12. But for various reasons not all the cities could furnish the figures for these earlier years. Figures for 1906–7 were sent in by 52 cities, and for the year 1911–12 by 59 cities. From these actual average annual salaries are figured the rates of increase.

A. For the past ten years; percentage is based on 1906–7 salaries in 52 cities.
   23 cities showed an increase of 25 per cent or more.
   18 cities showed an increase of from 10 per cent to 25 per cent.
   7 cities showed an increase of from 0+ per cent to 10 per cent.
   4 cities showed a decrease.

B. For the past five years; percentage is based on 1911–12 salaries in 59 cities.
   2 cities showed an increase of 25 per cent or more.
   22 cities showed an increase of from 10 per cent to 25 per cent.
   24 cities showed an increase of from 0+ per cent to 10 per cent.
   11 cities showed a decrease.

This table shows that most of the increase in average salary during the past ten years came during the first five years. From 1906 to 1911 there was a fair increase in most of the cities. But in the period 1911–16 there were 35 out of 59—61 per cent—that showed an increase of less than 10 per cent. There were 11 cities—19 per cent—that showed an actual decrease. Just why the average salary has decreased during the past five years in several cities and only very slightly increased in numerous others while the cost of living has gone steadily upward is more than can be explained here.

Digitized by Google

CURRENT EDUCATIONAL WRITINGS

I. REVIEW OF CURRENT LITERATURE ON GENERAL SCIENCE

The current literature on general science may for the purpose of review be divided into three groups: (*a*) articles and reports of committees dealing specifically with phases of general-science organization and instruction, (*b*) text-books and laboratory manuals, and (*c*) articles pertaining to secondary organization as far as this concerns science organization. Since this is the first of the series of annual reviews to appear in this periodical, there shall be no attempt to limit the review to only that literature which has appeared during the past year. Many excellent articles have appeared previous to 1916, and a complete list, including articles of a more general nature, but related to the general-science problem, will be sent upon request to the writer.

The titles of articles which give direct attention to general science are too numerous to include here. Mr. W. L. Eikenberry has prepared an extensive bibliography of the literature, March, 1917, *General Science Quarterly*. This list will be continued in an early number of the *Quarterly*.

The majority of these articles are found in late volumes of the following periodicals: *School and Society*, *School Science and Mathematics*, *School Review*, and *General Science Quarterly*. The general-science movement has brought out so much discussion, especially in the East, that the *General Science Quarterly* was established as a clearing-house for opinions on the subject. The first number was published in November, 1916. Mr. W. G. Whitman, Salem, Massachusetts, is the editor. The editor is finding no difficulty in getting copy and subscriptions for the journal. *School Science and Mathematics* has recently organized a general-science department with Mr. Fred D. Barber, of Normal, Illinois, as editor. *School Review* and *School and Society* have published several general-science articles which, as a rule, deal with the more general question of the place of general science in the curriculum. A few articles are found in *School World* and inform one that England, too, has been confronted with the reorganization of secondary science and the place of a general course as an introduction to the special sciences.

ARTICLES DEALING SPECIFICALLY WITH GENERAL SCIENCE

The content of these articles may be grouped under several topics. Comment of a general nature will be made upon these, followed by a list of the articles which bear particularly on the topic given.

Digitized by Google

1. *Arguments for and against general science.*—Fortunately or unfortunately for the reader a large number of the articles are enthusiastic reports of the success of a general-science course. This is in part explained when one notes that the majority are reports of teachers in the field. As far as the writer recalls, but a single teacher among those who have taught first-year science reports a lack of enthusiasm over the results. While the teachers are generally satisfied with general science, no measurement of the results or values of the course are available other than a few statistical investigations of the interest shown by pupils taking the work and of the elections in the subject in various schools.

The arguments for general science most commonly given in these articles are:

a) First-year pupils are too immature for special science courses.

b) Pupils are interested in the course since the subject-matter is drawn from the everyday experiences of the pupils.

c) Units of practical interest to the pupil are more desirable than theoretical or logical units of organization of a mature scientist.

d) With the greater interest of the pupil comes better scientific study, increase of elections, and a higher grade of work in later special sciences.

e) Organization is not dominated by college-entrance requirements.

f) The course is easily adapted to local conditions.

Many of the earlier articles previous to 1916 give similar arguments. The references below cover most of these arguments.

Hanna, *School Science and Mathematics*, 1916, p. 210.
Ruch, *School Science and Mathematics*, 1916, p. 49.
Barber, *School Review*, 1916, p. 426.
Hessler, *School Science and Mathematics*, 1916, p. 407.
Caldwell, *School Review*, 1915, p. 134.
Elhuff, *General Science Quarterly*, 1916, p. 17.

The arguments against general science come chiefly from college and university professors and from high-school teachers of special sciences. Those commonly given are:

a) The course lacks unity; it is a hodge-podge, or worse than that.

b) Good teachers of such a general course are not available.

c) Time spent in reorganization would be better spent in improving teaching of special sciences.

d) General science is a waste of time, since it gives little of fundamental principles of the sciences, no logical development of subject-matter, and little, if any, training in scientific method.

e) Pupils are interested in the special sciences if they are properly taught.

f) General science must crowd out other secondary courses.

Coulter, *School Review*, 1915, p. 1.
Millikan, *School Science and Mathematics*, 1916, p. 193.

Digitized by Google

One fact is evident from the reading of the articles: general-science courses are being introduced throughout the country. One is forced to believe, if the experiences of the teachers and administrators in the field is a fair criterion, that general science in some form of organization, given in the first year of the present high school or in the first or second year of the junior high school, has come to stay. Further viewpoints on the value of general science will be found in:

Lewis, *School Review*, 1916, p. 426.
Eikenberry, *School Review*, 1915, p. 181.
Rowell, *School Science and Mathematics*, 1911, p. 116.
McAuley, *School Science and Mathematics*, 1911, p. 14.
Taylor, *School Review*, 1916, p. 20.

2. *Aims of general science.*—Among the many aims of a general-science course one commonly finds: (*a*) acquisition of the simple principles of the various sciences; (*b*) usable information about daily experiences; (*c*) development of powers of observation and conservative conclusions; (*d*) training in problem-solving; (*e*) preparation for later sciences and a bird's-eye view of the field to aid the student in his choice of further science study; (*f*) deepening and broadening of pupils' interests; (*g*) prevocational guidance; (*h*) preparation for the life in which the pupil finds himself.

A proper balance of these aims gives the basis for selection of subject-matter. Yet few writers agree on the relative importance of each. This is well demonstrated by the various texts that have appeared. One finds difficulty in predicting what the content of the course will be from the statement of aims in the preface.

Carpenter, *General Science Quarterly*, 1916, p. 46.
"Massachusetts Committee Bulletin," *General Science Quarterly*, 1916, p. 37.
Elhuff, *General Science Quarterly*, 1916, p. 17.
Johnson, *General Science Quarterly*, 1917, p. 83.
Barber, *School Review*, 1916, p. 724.
Caldwell, *School Science and Mathematics*, 1916, p. 393; also *General Science Quarterly*, 1917, p. 1.
Eliot, *Occasional Paper No. 1, General Education Board.*

3. *Organization and content.*—Two important questions are raised by the articles: (*a*) What shall be the length of the course? (*b*) What principles shall govern the organization?

The Biology Subcommittee of the Committee on Reorganization of Secondary Education, appointed in 1913, reports that unity of subject-matter is of most importance; that two years of work in elementary science be required unless administrative difficulties prohibit it; that the content be grouped and presented in the following units: physical environment, plants, animals, and man; and that human welfare is the motive that should underlie all elementary science instruction. At the 1916 meeting of the National Education Association the same scheme was reported by the committee. Serious objections by

Digitized by Google

various speakers to the "vertical stratification" into special sciences followed the report.

Barber presents a somewhat different scheme showing how general science should be related to the home, street, and school, and then be expanded in the second year to plant and animal life about school, personal hygiene, and community sanitation.

Preliminary Report, Biology Subcommittee, *School Science and Mathematics*, 1915, p. 44.

Report by Biology Subcommittee, *Proceedings of the National Education Association*, 1916.

Barber, *School Review*, 1916, p. 724; also *General Science Quarterly*, 1917.

Coulter, J. G., *School and Society*, 1915, p. 226.

Whitney, University of Illinois High-School Conference, 1916.

In different schools practically every special science has been made the core of the first-year work. Thus we find biology and geography given as the organizing subject or general-science courses as a basis for geography, agriculture, and other special sciences. Some writers believe that physics and chemistry are fundamental to all science study. Others argue for topical units of organization without regard to the place given the content by the special sciences.

Hanna, *School Science and Mathematics*, 1916, p. 210.

Robinson, *School Science and Mathematics*, 1915, p. 717.

Hessler, *School Science and Mathematics*, 1916, p. 407.

Caldwell, *School Review*, 1916, p. 134.

Various courses not found in the textbooks given later have been organized.

Austin, *School Science and Mathematics*, 1911, p. 217.

Welch, *National Education Association Proceedings*, 1915, p. 1022.

Carpenter, *General Science Quarterly*, 1916, p. 46 (the organization and aims of the general-science course in the Rochester ([N.Y.] Junior High School).

Johnson, *General Science Quarterly*, 1916 (general science for eighth grade).

4. *Method.*—There is found in the literature much discussion of the method of teaching first-year science. The project plan; the emphasis of laboratory, demonstration, and textbook; the use of supplementary reading material; field work, are topics for argument. Several good references are listed.

Dewey, *General Science Quarterly*, 1916, p. 3; also *National Education Association Proceedings*, 1916.

Von Hofe, *School Science and Mathematics*, 1915, p. 751.

Webb, *School Science and Mathematics*, 1915, p. 679.

Hessler, *School Science and Mathematics*, 1916, p. 518.

Kilpatrick, *General Science Quarterly*, 1917, p. 67.

5. *Sequence.*—Several studies showing the position of general science and the basis for sequence which it affords are worthy of consideration. Among these are studies by Downing, Taylor, Barber, Lewis. With general science in the first year, biology comes most often in the second, physics in the third,

Digitized by Google

and chemistry in the fourth. Whitney has, it seems to the writer, summed up the reasons for our present sequence, if there are any, and has also stated well the factors which should govern the sequence. Since his statements do summarize the views, they may be given briefly. The factors determining the present sequence are (*a*) expediency, (*b*) size of classes, (*c*) cost of apparatus, (*d*) college-entrance requirements. The factors which should determine the organization and sequence are (*a*) needs and interests of the pupils, (*b*) development of the pupil and character of the locality, (*c*) early courses should prepare the pupil in the principles of the sciences, (*d*) applied science should follow preparatory courses, (*e*) half-year courses should be omitted.

Whitney, University of Illinois High-School Conference Proceedings.
Snedden, *School and Society*, 1915, p. 436.
Flexner, *Occasional Paper 3, General Education Board.*
Hanna, *School Science and Mathematics*, 1916, p. 210.
Coulter, J. G., *School Science and Mathematics*, 1916, p. 303.
Barber, *School Review*, 1916, p. 724.
Downing, *School Review*, 1915, p. 272.
Taylor, *School Review*, 1916, p. 20.
Lewis, *School Review*, 1916, p. 426.

TEXTBOOKS AND LABORATORY MANUALS[1]

Probably the textbooks and laboratory manuals which have appeared to date are the best evidence of the present status of general science as regards the ideas of organization, method, and aims of the course. Here, again, widely differentiated views are exposed.

There have appeared to date ten textbooks. One laboratory course not accompanied by a text is included in the list below. Each of the other texts except one is accompanied by a manual of laboratory directions.

Clark, *General Science.* American Book Co., 1910.
Rowell, *Introduction to General Science.* Macmillan, 1911.
Caldwell and Eikenberry, *Elements of General Science.* Ginn, 1914.
Snyder, *First Year Science.* Allyn & Bacon, 1914.
Hessler, *The First Year of Science.* Sanborn, 1914.
Clark, *An Introduction to Science.*
Pease, *A First Year Course in General Science.* Bobbs-Merrill, 1915.
Elhuff, *General Science,* Heath, 1916.
Weckel and Thalman, *A Year in Science.* Row, Peterson, 1916.
Brownell, *Laboratory Lessons in General Science.* Macmillan, 1916.
Barber, *First Course in General Science.* Holt, 1916.

General Science by Miss Clark represents a course not intended to prepare for college-entrance examinations, but a course which will prepare the reader

[1] The paragraph following the title of each textbook gives in essence the purpose of the course as expressed in the preface of the book.

Digitized by Google

to meet life's important problems and to pass muster on the principles and theories underlying scientific and economic management in the shop or in the home. The *Laboratory Manual in General Science* gives directions for experiments designed to make the pupil familiar with the facts and theories discussed in the textbook.

Introduction to General Science by Rowell is written to interest the pupil in immediate needs and his close surroundings and to lead him to arouse himself to the habit of seeking for a cause and of looking beyond the present and immediate to the future and ultimate. It further aims to give the pupil a bird's-eye view of all sciences, the power to see the interrelation of all sciences, and to reason from many points of view. Another value lies in awakening the mind to the possibilities of scientific knowledge and mental attainments and stimulating the ambition to learn more about at least one science. The course is elastic and local conditions can be emphasized.

Elements of General Science by Caldwell and Eikenberry proposes to give a usable fund of knowledge about common things, a more scientific attitude in interpreting problems, to make more effective and profitable the later work in the differentiated sciences. No attempt is made to maintain the unity of any one of the different sciences from which material is taken. Rather unity is secured by means of the logical connections between topics. The topics are of general significance.

First Year Science by Snyder deals with the earth and the sun in their relations to man. This treatment gives three advantages: (*a*) unity, (*b*) practical interest, (*c*) preparation for college-entrance examinations (in physiography). The language is simple, and the principles are thoroughly illustrated by experiment. All secondary sciences are treated so that the pupil may find his particular interest. The book is complete; no reference or manual is needed.

The First Year of Science by Hessler is written to meet the need of general-science instruction. The most important part of the course is the acquisition of the introductory notions of physical and chemical phenomena, but it includes also the problems of modern conveniences, the soil, plants and animals, and sanitation. The text is an answer to the question: Can general science be given in large first-year classes with varied needs, without specially prepared teachers and without expensive equipment?

An Introduction to Science by Miss Clark aims to start pupils on projects which will influence for good their present and future lives.

A First Year Course in General Science by Miss Pease offers an introduction to special secondary sciences. For those who do not finish high school it gives a comprehensive view of science. The world in which the student is a part furnishes the material for the course. This begins with the earth, the forces acting upon the earth, and the composition of matter. Physiographical material follows, and then life on the earth completes the view. The laboratory exercises are designed (*a*) to fix the principles and facts, (*b*) to teach by experiment one or more applications of the principle, (*c*) to accustom pupils to follow directions

Digitized by Google

and record accurately observations, (*d*) to teach pupils to draw reasonable conclusions.

General Science by Elhuff is intended to offer a scientific explanation for the many experiences of pupils and to create a desire for further knowledge. It meets the demand for both full-year and half-year courses, and presents the fundamental principles of science and of scientific study in such a way that pupils will acquire the desire to study the special sciences. For half-year courses the first twenty-four chapters are to be followed. The basic ideas in the course are matter, its properties and reaction of matter upon matter, and energy.

A Year in Science by Weckel and Thalman is an effort to present subject-matter of interest to the pupil, adapted to his stage of mental development, and of educative value. It provides a groundwork for the special sciences and has stood the test of time. Fifteen years of experimentation have established the course. Information for appreciation of environment and scientific thinking train the pupil to become a better citizen of the community.

Laboratory Lessons in General Science by Brownell brings together from scattered sources that which would appeal to beginners and which would find unity in their experiences and interests. The emphasis in these lessons is placed upon the personal and community aspects of the pupil's interests. This makes necessary and desirable topics of social science. Differentiation of the various sciences is not found in the lessons.

First Course in General Science by Barber is not written primarily to survey the whole field of science and present scattered bits from every special science. Nor is the course primarily intended for preparation to later science study. The primary function of the course is to give a rational, orderly, scientific understanding of the pupil's environment. The train of thought in the organization is guided by two parallel rails, the one physical—*energy*—and the other, sociological, *human welfare*.

These textbooks are discussed as to choice of material and organization in several articles and book reviews. Lewis, *School Review*, 1916, p. 426, shows the distribution of material in several texts. Webb, *School Science and Mathematics*, June, 1917, gives a statistical study of the ten texts. The current number, May, 1917, of the *General Science Quarterly* contains a review of each of the texts.

ARTICLES AND PAPERS RELATED TO THE GENERAL-SCIENCE SITUATION

In the 1915 and 1916 reports of the Commissioner of Education one reads that the junior high-school movement is making rapid progress. This movement concerns the science reorganization. The student of the general-science problem will be interested in the literature listed below.

Judd, "The Junior High School," *School Review*, 1916, p. 249.
Weet, "A Junior High School," *School Review*, 1916, p. 142.
The Detroit Junior High-School Course of Study.

Digitized by Google

Carpenter, "General Science in the Junior High School (Rochester)," *General Science Quarterly*, 1916.

Several other articles or papers with which the reader interested in general science and its future should be familiar are:

Flexner, "The Modern School," *Occasional Paper No. 3, General Education Board.*

Eliot, "Changing Aspects in Secondary Education," *Occasional Paper, No. 1, General Education Board.*

Snedden, "New Problems in Secondary Education," *School Review*, 1916, p. 177.

Snedden, "Principles of Aim, Organization," *School and Society*, 1915, p. 346.

Orr, *Massachusetts Board of Education Report*, 1914–15.

Briggs, "General Science in Secondary Schools," *Teachers College Record*, 1916, p. 19.

II. BOOKNOTES AND REVIEWS

WILKINSON, W. A. *Rural School Management.* Boston: Silver, Burdett & Co., 1917.

This is the first volume of the "Teacher Training Series," being put forth under the editorship of Dean Charters, of the Faculty of Education, University of Missouri. The editor points out that the majority of texts for teachers stress principles rather than methods and assume that the young teacher will commence work in the city graded school. The new series is planned to meet the need of the teacher already in service and of the inexperienced teacher, more particularly in the one- and two-room school of rural districts and smaller villages.

With respect to subject-matter, this book is not composed of the same old materials simply rearranged, repolished, and retitled. Since human nature is in the main largely identical in town and country, and fundamental knowledge cannot be changed in any large way, the subject-matter treated is, in part, necessarily similar to that found in many of the older professional books. Fundamental knowledge, however, has become a hydra-headed creature. Instruction in every item is neither possible nor necessary, for time is pressing, and that which is fundamental in one locality is foreign to the needs of another. The teacher, even though inexperienced, must choose. How frequently in the past this choice has been thoughtless or, at best, has been under the guidance in the main of tradition! Here is made a noteworthy contribution toward assisting all rural-school teachers to recognize two large facts and to conduct their activities, whether within or without the school premises, in accordance with these facts. There is never lost the point of view that the boys and girls of the schools in question are country boys and girls, and that they have bodies and minds and habits, for the efficient development of which the school as an institution and the teacher as its presiding officer have been made responsible. The other underlying current treats of the power which the school may and should exercise in improving the social and economic status of the community.

Digitized by Google

Chapters showing how the interest of the patrons of the school may be aroused and maintained, how the school may be made a social center, and how it may become a community-health agency will be especially helpful to busy rural teachers and will exemplify the aim of directing improvement along social and economic lines. With respect to the management of the more direct internal activities of the country school, the book is exceedingly suggestive. The text abounds with rational material in concrete form. The experience which the child brings with him from his home environment is made the basis for developing and enlarging his inherent powers. The spirit of the country growth and creativity has been permitted to penetrate and permeate the school building. Hence the rural teacher may forget the formal stuff of his own pupil days and the academic niceties of his later student hours, and, actuated by the methods and concrete applications which the author supplies in profusion under the headings, among others, of how to govern, how to develop habits of study, how to make a flexible daily program, how to keep records and make reports, how to beautify, equip, and use the school premises, how to organize and conduct boys' and girls' clubs, school will not be a series of detached inco-ordinated incidents isolated from the remainder of the child's life, but a strong and necessary link of the chain of an ever-widening self-directing existence.

The volume itself on the mechanical side is a good example of the book-maker's art. The author, as student, has been impressed with the value of good paper, clear type, the emphasis of an occasional italicized phrase, and sectional headings in "black face" or "small caps." Each chapter closes with a summary, class exercises, and brief clearly indicated references for supplementary reading. There is appended a concise bibliography pertinent to the principal topics which are discussed.

W. L. RICHARDSON

UNIVERSITY OF CHICAGO

PEARSON, F. B. *The Vitalized School.* New York: Macmillan, 1917. $1.25.

In this book an attempt is made to "interpret some of the school processes in terms of life processes, and to suggest ways in which these processes may be made identical." The thought running throughout its pages is that "the school process is an integral part of the life process and not something detached from life." In his application of this principle the author has produced an inspirational rather than an informational book. There is much said about patriotism, the teacher as an ideal, complete living, behavior, poetry, and life. Besides the wholly inspirational chapters there are a few which contain material that is more or less practical. For example, a typical vitalized school is described in the last chapter and the socialized recitation in another, in both of which the discussion is concrete and the ideas suggestive. The style throughout is free and easy and especially adapted to the teacher of little training and experi-

Digitized by Google

ence. The questions and exercises at the end of each chapter suggest that the author expects his work to be used both as a text and as a reading-circle book. In either of these capacities it would be more valuable for what it suggests than for what it contains.

DAVIS, C. O. *Public Secondary Education.* Chicago: Rand McNally & Co., 1917.

The correct title of this book is "Public Secondary Education in Michigan." After devoting three chapters to the colonial Latin school, the middle period, and the early Northwest, the author begins his discussion with a chapter on early Michigan. Five chapters follow this one, the three most significant being one each on the academy movement, the union schools, and the high schools. It is in these chapters that one finds the explanation of current practices in secondary education in Michigan and to a certain extent in the nation at large.

In the introduction Professor Davis makes the point that the history of secondary education in Michigan is in reality the general history of public secondary education in the entire United States, and that his discussion is a history of public secondary education in America viewed through the lenses of Michigan's history. While there is some justification of this point of view, yet one should not be led to feel that Mr. Davis has written a history of public secondary education in America—something that cannot be accomplished with other than meager results until scholars have done for public secondary education in each state what Professor Davis has done for this phase of Michigan's educational history.

ROWE, HENRY K. *Society, Its Origin and Development.* New York: Scribner, 1916.

The method of this book is inductive rather than deductive, in which respect it differs from many of the books on elementary sociology. The plan of the writer is to take cross-sections of group life in order to obtain data for generalization, just as the biologist makes cross-sections of laboratory specimens in order to determine structure. By the use of such a method the author emphasizes the concrete rather than the abstract, thus furnishing the beginner a valuable introduction to the study of the principles of sociology as well as a prelude to the various social sciences.

The greater part of the book is devoted to four cross-section views as follows: "Life in the Family Group," "Social Life in the Rural Community," "Social Life in the City," and "Social Life in the Nation." A list of the subjects treated in the cross-section view of community life illustrates the concreteness of the material included therein. The topics are: the community and its history, the land and the people, occupations, recreation, rural institutions, rural education, the new rural school, rural government, health and beauty, morals in the rural community, the rural church, and a new type of

Digitized by Google

rural institution. Each of these topics receives a somewhat brief but rather concrete treatment, both of which are adapted to the one entirely untrained in the sociological field.

It is the custom at present for some high schools to offer a course in current sociological, economic, and civic problems. To those interested in such a course the book under review will have some interest. While it is not a suitable text for such a course, it does contain much valuable and usable material relative to sociological problems. It is one of the many valuable reference books without the extensive use of which such a course as the foregoing is impossible.

III. PUBLICATIONS RECEIVED

(Detailed discussions of some of the following books will appear later.)

GENERAL EDUCATIONAL THEORY AND PRACTICE

BETTS, GEORGE HERBERT. *Class-Room Method and Management.* Indianapolis: Bobbs-Merrill Co., 1917. Cloth. Pp. 386.

BOURNE, RANDOLPH. *Education and Living.* New York: Century Co., 1917. Cloth. Pp. x+236. $1.25.

DAVIS, CALVIN O. *Public Secondary Education.* Chicago: Rand McNally & Co., 1917. Cloth. Pp. xiv+270.

HUGHES, JAMES L. *Training the Children.* New York: A. S. Barnes Co., 1917. Cloth. Pp. 148.

A stimulating, inspiring, constructive series of essays.

LEAVITT, FRANK M., and BROWN, EDITH. *Elementary Social Science.* New York: Macmillan, 1917. Cloth. Crown 8vo, pp. 137. $0.80.

WILKINSON, WILLIAM ALBERT. *Rural School Management.* Boston: Silver, Burdett & Co., 1917. Cloth. Pp. xiii+420.

TEXTS AND SUPPLEMENTARY BOOKS FOR THE HIGH SCHOOL

ARMAND, EMMA C. *Grammaire Elementaire.* Boston: D. C. Heath & Co., 1917. Cloth. Pp. viii+111. $0.60.

Simple in style, written in French, supplemented by copious exercises.

ASHLEY, ROSCOE LEWIS. *The New Civics.* A textbook for secondary schools. New York: Macmillan, 1917. Cloth. Crown 8vo, pp. xxviii+420. $1.25.

HOUSE, RALPH E., and BABCOCK, EARLE B. *Trois Contes de Theuriet.* New York: Henry Holt & Co., 1917. Cloth. Pp. viii+185.

A legend, a charming story, and a love affair in the early life of the author—all delightfully told. Notes and vocabulary.

MERINGTON, MARGUERITE. *Holiday Plays.* Five one-act pieces for Washington's birthday, Lincoln's birthday, Memorial Day, Fourth of July, and Thanksgiving. New York: Duffield & Co., 1917. Cloth. 12mo, pp. 164. $1.50.

Digitized by Google

OPDYCKE, JOHN B. *Working Composition.* Boston: D. C. Heath & Co., 1917. Cloth. Illustrated. Pp. xiii+337. $1.28.

Aims to link up English composition with work and all other sorts of human experience; the basis is life-needs; the method used is the finding and solving of problems; expression is thus purposive.

SHERIDAN, BRINSLEY. *The School for Scandal.* Collated and edited by HANSON HART WEBSTER. (The Riverside Literature Series.) Boston: Houghton Mifflin Co., 1917. Cloth. Pp. liii+145. $0.55 net.

STEMPEL, GUIDO H. (Editor). *A Book of Ballads Old and New.* New York: Henry Holt & Co., 1917. Cloth. Pp. xxxviii+329.

Contains an excellent introduction on the ballad, its origin, style, popularity, and basis of appreciation. A good selection of old, American, and new ballads.

HELLER, OTTO. *In St. Jürgen von Theodor Storm.* New York: Henry Holt & Co., 1917. Cloth. Pp. xviii+147.

MCLOUTH, LAWRENCE A., and RICHTER, KURT E. *L'Arrabbiata. Novelle von Paul Heyse.* New York: Henry Holt & Co., 1917. Cloth. Pp. xii+105.

Open Court Publishing Co., Chicago, 1917. *The Complaint of Peace.* Translated from the *Querela Pacis* (A.D. 1521) of ERASMUS. Cloth. 12mo, pp. 80. $0.50.

MISCELLANEOUS

BACON, CORINNE (Compiler). *Children's Catalog of Thirty-five Hundred Books.* New York: H. W. Wilson Co., 1917. Cloth. Pp. 527.

CRABB, GEORGE. *Crabb's English Synonymes.* New York: Harpers, 1917. With an introduction by JOHN H. FINLEY, LL.D., Commissioner of Education, State of New York. Cloth. Pp. 769. $1.25.

The original work supplemented with many words and their applications made necessary by the lapse of a century of time. Invaluable for desk reference.

FISHER, ANNIE, and CALL, ARTHUR D. *English for Beginners.* Boston: Ginn & Co., 1917. Cloth. 12mo, pp. xix+250. $0.60.

POWELL, SOPHY H. *The Children's Library, a Dynamic Factor in Education.* New York: H. W. Wilson Co., 1917. Cloth. Pp. xiv+460. $1.75.

Proposed Educational Code for Colorado. Prepared by committee appointed under the Civic and Legislative Bureau of the Denver Civic and Commercial Association in collaboration with educators, school officials, and business men from all parts of Colorado, 1917. Pp. 90.

STAHL, JOHN M. *Just Stories.* Chicago: M. A. Donohue & Co., 1916. Pp. 156. Paper, $0.25; cloth, blue and gold, $0.50; postpaid.

Study of Educational Conditions in Mexico and an Appeal for an Independent College. Cincinnati: Published for the Committee, 1916. Paper. Pp. 93.

Digitized by Google

THE SCHOOL REVIEW

A JOURNAL OF SECONDARY EDUCATION

VOLUME XXV SEPTEMBER 1917 NUMBER 7

THE JUNIOR COLLEGE AS AN INTEGRAL PART OF THE PUBLIC-SCHOOL SYSTEM[1]

ALEXIS F. LANGE

Professor of Education, University of California

The junior-college idea is in no sense a Procrustes-bed, and its advocates have nothing in common with that legendary highwayman of Attica; yet this bed suggests several very broad questions—questions inseparable from the junior-college movement as a whole. One is: Shall certain colleges have their heads cut off, and, if so, by whom? Another is: Shall the American university-college have its legs cut off, and, if so, where? The third is: Shall the American four-year high schools be stretched, and, if so, how? Now, it seemed wisest for me to relegate the first two of these questions and all that goes with them to the margin of consciousness and to focus attention on the junior college as an affirmative answer to the third and hence as a new member of an evolving public—or, more precisely, state—school system. In doing so I shall acquire merit, I hope, by drawing largely on California for object-lesson material, letting you, if you will, look after the *mutatis mutandis* applications.

We are not likely, I take it, to see the junior college "steadily and see it whole," unless we avoid entangling alliances with notions

[1] An address given at the conference of the University of Chicago with secondary schools, April 10, 1917.

Digitized by Google

and loyalties sprung from usage or with educational theory without a country, and choose, instead, as angle of vision, the common good of American democracy. From this point of view we cannot but be helpfully directed by the postulates and working principles implied. We start, then, with the idea that the school system is an organ of the body politic, bone of its bone, flesh of its flesh, an organ devised for each and all, from generation to generation. Its structure must needs therefore be shaped so that, as time goes on, more and more adequate recognition may be given to the educational rights of both the minority and the majority of child-citizens —that, in other words, provision may be made, not only for length and continuity, but also for breadth and completeness, of educational opportunities. Its supreme function accordingly becomes that of insuring, with increasing certainty, the greatest preparedness of the greatest number, the concept preparedness including, in this connection, becoming, doing, being, singly and collectively, but excluding whatever would degrade a human being to a mere means or device and would prevent the making of a life worthy of freemen. But to have it function thus continuously presupposes capacity for further and continuous development, for peaceful adaptations to new occasions and the new duties they teach. Otherwise it soon begins to minister to the quick as if they were the dead, and itself becomes a case of *rigor mortis*. To have it function thus continuously presupposes such correlation of parts as to reduce the danger of functional troubles to a minimum, provided this living unity in variety does not mean an enlightened despotism within or without, or lack of chances for a social group to make blunders, to get what it deserves, and so to learn to do better. Democracy's choice is like Lessing's choice of the search for truth rather than truth as a gift. The process of becoming efficient is to be preferred to efficiency for its own sake. It follows from all this that the school phases of social evolution can be adequately dealt with only by a state-schoolcraft that combines farsight and foresight with evolutional thought and practice. Not wanted is the conservatism of Lot's wife, the original "standpatter," nor the radicalism devoid of historic sense. What is wanted is, in a word, teleological opportunism, which has ample room for temperamental

Digitized by Google

differences as to speed. The etymological meaning of the term pedagogue needs to be Americanized into that of leading citizen, with the connotation that such a one is aggressively alive to the inherent purpose of democracy: to form a more perfect union of educational effort; to establish justice as to educational opportunities; to insure domestic tranquillity for the parts and the whole of the state's educational institutions; to provide for the common defense against all enemies of the child-citizen; to promote the general welfare, not by perverting young Americans into textbooks, papery inside and leathery outside, but by advancing them by means of school subjects and school life in preparedness as to personal freedom and loyal co-operative service.

When we fit the foregoing considerations into the general theory of education; when we thereupon examine those critics who think with their heads and thus give out light as well as heat; when we then watch the many adaptive changes going on and try to interpret their trend and significance, the need of reshaping the inherited school system—if an accident of history deserves to be called a system—into an organ adequate to the functions demanded by the twentieth century becomes convincingly obvious. Nor is it difficult then to project through the fixed points of the past and present the main lines of reconstruction and to arrive thereby at a rational hypothesis for direction and action—a hypothesis, moreover, that does not involve laying violent hands on anything but a few custom-caked prepossessions. Basing my best knowledge and belief largely on data derived from the situation I know best at first hand, I would read the shadows of coming events and sketch the completed readjustment and extension as follows:

1. The state university, embodying in a higher indissoluble union German and English university aims, rests on a foundation of fourteen grades of elementary and secondary education, its first two years corresponding to the last two of the four-year college. It retains the last two years of secondary education, but for a gradually diminishing number of students.

2. For city and country alike the elementary-school period ends with the sixth grade; not so, however, the period of compulsory school attendance.

Digitized by Google

3. For city and country alike the elementary grades are followed normally by three intermediate grades, designed for the years of early adolescence and adjusted to the educational needs of all pupils, be their school life long or short. For the country this presupposes the county as the unit of educational organization and administration.

4. For city and country alike provision has been made for education and training to the end of the secondary-school period, i.e., to the end of the fourteenth grade. Here again the county unit is presupposed.

5. The lower vocational system, comprising a variety of arrangements for training, is articulated with the intermediate school; the middle vocational system with the high school. To the middle vocational system belong the normal schools and the various vocational departments of junior colleges.

6. As far as the institutional grouping of the secondary grades is concerned, the old rigidity has been superseded by flexibility. One city or county, for example, may follow a 6-3-3-2 plan; another may have the grouping 6-2-4-2; a third may have a 6-4-4 division. According to local conditions, one community may have only the intermediate school, articulated, to be sure, with a high school elsewhere; another the intermediate and high-school grades, articulated, to be sure, with a junior college elsewhere; a third may provide for an eight-year secondary school in one place and under one management, and so on.

Being interested in reporting rather than arguing, I can do nothing at this point for the doubting Thomases or the Missourians. I can only affirm that in California, at any rate, the hypothesis or program thus crudely outlined accords essentially with professional public opinion. None other looks like something "just as good." If various committee reports and their acceptance by bodies of teachers may be trusted at all; if the attitude of the universities, particularly of their departments of education, is significant; if the policies of the state department mean anything for the future, substantial agreement exists as to the goal to be achieved. Whether it will be reached, and how soon, is, of course, a question concerning which one must heed Hosea Biglow's warning: "Don't prophesy

Digitized by Google

onless ye know." At present the omens are auspicious. The following glimpses of the situation may serve to illustrate this fact and at the same time bring to our minds the chief conditioning factors in the development of junior colleges.

1. To begin with, the intermediate school is being institutionalized city by city at a reasonable rate of speed. It is sanctioned by law and approved by the state board, which has provided for an intermediate teacher's certificate. Only a few counties have as yet availed themselves of their constitutional privilege to adopt charters, but the tendency is in that direction. It seems likely, moreover, that the rural intermediate school can be had sooner through specific mandatory legislation, making the county the unit of educational administration. The bearing of such legislation on the solution of rural-life problems is too obvious to be seen only by schoolmen.

2. The high schools of the state, now over 280 in number, have attained a stage of development that warrants an upward extension both in the larger cities and in the wealthier rural high-school districts. The state contributes $15 per pupil; each county $60 more. Less than 30 high schools have only 3 teachers; the average is about 12. For teachers of the traditional branches the standard of certification is one year of graduate university study, including professional training; for teachers of the newer special subjects, the equivalent of four years of preparation beyond the four-year high school. The state board has recently adopted a plan whereby all high-school teachers come under state supervision during the first two years of service.

3. It is coming to be generally understood that the attempts to pour the new wine of vocational training into the old skins of organization and method are destined to be futile. With this goes the growing conviction that the training for specialized efficiency cannot wisely be substituted for the general education for which the intermediate school and the high school must continue to stand. Foundation courses in both, yes; finishing courses, no; instead, vocational projections and continuations.

4. Since 1892 the state university has been gradually reshaping itself around two organizing ideas. One was and is that, for

Digitized by Google

theoretical and practical considerations alike, the university proper should begin in the middle of the inherited four-year college scheme; the second was and is that the work of the first two years is as a matter of history and fact all of a piece with secondary education. This trend of thought and preaching and practice resulted *gradatim* in the junior certificate, to mark the distinction between university and secondary education; in the policy of placing all professional schools on a basis of not less than two years of non-professional training; in making the studies of the last two years of the high school and the first two of the college largely interchangeable; and last, but not least, in publicly exhibiting the requirements for the junior certificate in terms of unified secondary curricula covering Grades 9–14, inclusive. In ways of her own, Leland Stanford Junior University, under the leadership first of Dr. Jordan and now of Dr. Wilbur, stands committed to virtually the same policy. Thus the precept and example of the two universities prepared the way for the collegiate extension of the public high school, and the junior colleges that have sprung into existence or will do so may rely on the continued support and co-operation of these two institutions.

5. The first junior colleges were established under the law of 1907, which gave high-school districts permission to introduce post-graduate courses. A year ago the State Council of Education adopted the following recommendations: (1) that the legislature explicitly recognize the junior college as an integral part of the secondary-school system; (2) that the legislature permit the establishment of a junior college only where the assessed valuation of taxable property is such as will support adequately, first of all, the elementary, the intermediate, and the traditional high-school grades, and, secondly, a two-year junior college—in other words, that the law safeguard the equitable distribution of money for educational purposes and prevent the multiplication of well-meant but doomed attempts at junior colleges; (3) that the legislature authorize counties to establish junior colleges, either as additions to existing county or district high schools or as separate institutions.

Bills embodying these recommendations have been drafted by the Commissioner of Secondary Education, and there is every reason

Digitized by Google

to believe that they will be enacted into law at the present session of the legislature. If so, several over-ambitious communities will have to be content with a policy of watchful waiting, but there will remain, as nearly as I can determine, about fifteen junior colleges that meet the legal requirements for their life, liberty, and happiness.

When we review the ground traversed thus far, the rise and progress of the junior college appears as an integral phase of a country-wide movement toward a more adequate state system of education. In California, as elsewhere, the junior college is causally connected with the other constituent phases of the whole process of reorganization. In California, as elsewhere, its evolution is determined by the convergence and coalescence of three currents of educational endeavor. The first is directed toward an intelligent adjustment of the university, in the Continental European sense, to the traditional American college. This process, it may be taken for granted, will result in the general absorption by the university of the last two years of the inherited four-year college. And this necessarily implies the practical recognition of the first two years as the continuation and culmination of secondary education. The second is directed toward making the high school function more effectively, for all alike, during the whole period of adolescence. Now the high school begins too late and ends too early. The result is a truncated and non-functioning education for most high-school graduates. The third is directed toward increasing the efficiency or preparedness of the nation through the creation of lower and middle systems of vocational training. For reasons too obvious to rehearse, the school must furnish such training, first, for those whose education for general social efficiency is not prolonged beyond the first eight or nine grades; secondly, for those whose general education ends with the eleventh or twelfth grade and who are not headed for one of the professions, in the restricted sense.

It is, of course, an inevitable phase of growth that as yet not one of the junior colleges I know about has fully found itself. Growing-pains cannot be escaped. Even a butterfly has to spend its infancy and youth as a caterpillar. But even now the uncertainties that

Digitized by Google

exist relate rather to ways and means than to fundamental conception and aim. The coming of the junior college means that the high school is taking possession of its own, the university-college continuing—presumably for many years to come—to give two years of secondary education also. Accordingly, the junior college, in order to promote the general welfare, which is the sole reason for its existence, cannot make preparation for the university its excuse for being. Its courses of instruction and training are to be culminal rather than basal. The real differences between the collegiate and the four-year part of a full-grown high school are not due to any other institution. They exist because the students of the college division have normally passed the middle point of adolescence; they exist, further, not because some will attend a university, but because the majority will presumably not do so. They are precisely analogous to those which give a special character to the intermediate school. And so the junior college will function adequately only if its first concern is with those who will go no farther, if it meets local needs efficiently, if it enables thousands and tens of thousands to round out their general education, if it turns an increasing number into vocations for which training has not hitherto been afforded by our school system. Hence it will of necessity be as nearly autonomous as its place in the public-school system of the state permits; hence, too, its structure will normally have to exhibit a bifurcation into vocational and cultural departments, both organically united with what precedes.

When I am asked about junior-college vocational departments, my advice, for good or ill, is: develop two in each junior college—one for home-making and women's occupations other than teaching; the other for civic efficiency, especially for the careers, even now in the making, within the broad fields of city, county, and state administration. Beyond this develop vocational departments designed to meet more localized needs. A rural junior college would naturally, therefore, make provision for training in practical scientific farming. In industrial centers the emphasis would fall on technological branches. Commercial centers would organize a junior-college preparation for business. In every case opportunities would exist for combining schooling with calling. No national preparedness program, I venture to assert, can be

Digitized by Google

satisfactory that does not purpose to fill the gap between the training of the artisan and the university expert and that does not propose to fill this gap for as many as possible by as wide a distribution of opportunities as possible. A special reason why the professional departments of universities should further this consummation lies in the strong probability that these departments would then be relieved of thousands whose attendance is owing not so much to mistaken ambition as to the absence of other means of vocational training. A very similar benefit would, of course, accrue to the normal schools.

Thus far only one of the California junior colleges—the Polytechnic Junior College of Los Angeles—has developed well-organized vocational finishing courses—for rather obvious reasons, such as the absence of blazed trails, as far as organization is concerned, the comparatively large outlay of money required, the predominantly academic interests of the high-school teachers and principals initiating the local propaganda for a junior college, the comparative ease with which the suggestion can be made to work in communities that the university is coming to their town, etc. In some instances the argument that the junior college would keep much money at home and would, for individuals, cut college expenses nearly in two has proved more efficacious than any other. In short, while efforts are now being made in several places to organize vocational courses, the junior colleges continue to offer to a greatly varying extent only the lower-division studies of a college of liberal arts. As soon, however, as the legislation referred to above is secured—within the next few weeks—making the junior college the capstone of secondary education and assuring to it $75 per student from county and state, projects for vocational training are bound to loom larger than they have done hitherto. Nor is it unlikely that sooner or later the state will adopt the recommendation of the State Council of Education to the effect that the state high-school tax be increased for the specific purpose of furthering the development of vocational departments in junior colleges.

As long as an organic correlation of part and part can be brought about and maintained, latitude in the grouping or segregation of secondary grades is of far greater value than uniformity. Local

Digitized by Google

conditions, for example, may well make it necessary, if not wholly desirable, to establish a junior college by itself. Here and there it may be found most practicable to assign the tenth as well as the ninth grade to the intermediate school and then to make the eleventh and twelfth grades constituent parts of the junior college. Plans of this sort are actually under serious consideration in Los Angeles and Sacramento. The typical junior college, however, will doubtless continue to consist of a two-year addition to an existing high school—an addition more or less intimately united with it as to aims, organization and administration, teaching staff, and school community life. At present three tendencies are noticeable with reference to this problem of correlation. One is to separate the junior college as far as possible from the high school, to create as fast as possible a special faculty, to develop exclusive forms of student activities, to emphasize the methods in vogue in universities, and so on. Another is to differentiate as little as possible—that is, to treat the junior college merely as a high school lengthened by two years. According to a third view the advantages of both types of organization can be secured and the disadvantages of each largely avoided by applying the principle of unity in variety. A special faculty, yes, but not one without a share in the work of the grades below the collegiate division; one principal, yes, but also a junior-college dean; unity and continuity of program, yes, but also the attitudes and methods suitable for young manhood and womanhood; a distinct college life, yes, but not an isolated, separate one, least of all a pinchbeck imitation of the large university-college. The San Diego Junior College may serve as a good illustration. It is this inclusive third view, it seems to me, that does justice to all of the factors involved and that should, therefore, serve as a guide in working out the many new and perplexing problems of instruction, of administration, and of student life.

It is too early as yet to dwell at length on the relation of the junior college to its environing community and on the extramural services it will render as a center of educative influences. But there can be little doubt as to its wider mission, particularly in a state where the landscape is not dotted with small private colleges. There is the call to initiative and co-operation within its circle of

Digitized by Google

intermediate and high schools. There is the need of furthering clearer community thought and the advance toward the highlands of civic life. There is the challenge to assist in making university extension really worth while by making it largely supplementary to junior-college extension, and so forth. The old functions of the college of fifty years ago, discharged in modern ways; the new functions called for by modern insights and needs added—such may well be the substance of things not seen but hoped for.

In view of the mission of the junior college to do new and better things in new and better ways, the selection of the teaching staff becomes a matter of supreme importance. Archaic, second-hand teachers will not do. One requirement to be insisted on is a degree of mature and modern scholarship not lower than that found in junior colleges directly connected with universities. If such scholarship is at the same time more human and less neo-scholastic, all the better. Roughly measured, this requirement will be found to call for not less than two years of graduate university preparation. Of course an equivalent in terms of mastery without such university aid should always be more than acceptable. Degrees do not matter; the essential thing is to be sure-footed in the ways of the scholar. Another *sine qua non* is an ample measure of the liberal culture that embodies the spirit of service, informed by broad scholarship and inclusive appreciations. A mere specialist may do no great harm in a university; in a junior college with its man-centered aims his ways would lead to destruction. Normally a Ph.D. applying for a junior-college position should be asked to present a certificate of rebirth. A third is, of course, teaching power of a high order, demonstrated, not only in the course of professional training, but also in the secondary grades below those of the junior college. Whatever universities may continue to do, practice-teaching on junior-college students is out of the question. Such power includes, not only ability to teach young men and women by an adequate use of instruction material, but also directive insight into the principles of secondary education and into the place and functions of the junior college as a part of the state school system. Of course no such standard can be applied at once. The present situation is analogous to the beginnings of university work

Digitized by Google

in colleges, which at first had to rely largely on existing faculties. Here and there junior-college courses are attempted by instructors whose specialty lies elsewhere. Here and there, too, a department head insists on doing what one of his assistants could do better. But the tendency, I am glad to report, is strongly toward the higher qualifications outlined, so that meanwhile the universities need not fear a lowered standard. At the University of California the scholarship average of those coming from junior colleges is found to be several fractions higher than the general university average—a fact not wholly accounted for, to be sure, by the scholarly fitness of junior-college teachers. The junior-college year is longer by at least a month. Hitherto classes have been small. They have been homogeneous and so have been able to start in on a higher level than is possible for the heterogeneous mass of university-college Freshmen. They have been in charge, not of the least, but of the most, experienced teachers of their respective institutions. They have been less exposed to university "side shows." They have come to their university life and work with great expectations, with freshness and enthusiasm. Nor should we overlook the general tonic effect of the junior-college idea upon high-school men and women. There is inspiration in the thought that the professional elevator need not stop running at the twelfth-grade floor. To this stimulus the state university, a year ago, added another, on the recommendation of the School of Education. It established a higher professional degree, the high-school certificate, obtained at the end of one year of graduate study, being regarded as the equivalent of a first or lower professional degree. The following conditions must be met: (1) four years or more of successful teaching experience; (2) a total of two years of residence graduate work distributed so that one-third goes to the department of education, another to some other university department, the remaining third of the work being subject only to the general proviso that all of the courses needed for the degree must be advanced; (3) an acceptable professional thesis dealing from the educational point of view with some problem of consequence.

The response has been most gratifying despite the fact that the label, tentatively chosen, namely, Graduate in Education, has

Digitized by Google

nothing of the irridescence of the Ph.D. Indeed, the hope is fully justified that before long junior-college faculties will be increasingly recruited from those who have reached this new milestone, or the spot marked by it. Unless some unforeseen upheaval prevents, the State Board of Education is likely to prescribe a junior-college certificate, with requirements similar to those I have been discussing.

Now, finally, what of the relation of the public junior college to the state university-college? Obviously the latter may make it or mar it, for until the state shall create a directive educational organ the state university will not only continue to be guide, philosopher, and friend in all educational matters, but will also continue to have a large measure of extra-legal power. Such a position constitutes a public trust, to which the university must be said to be faithless if it does not make its fostering care and leadership all-inclusive; worse still, of course, if it subserves its supposedly special interests at the expense of the public welfare as a whole. And so, when the junior colleges come seeking the aid and institutional recognition indispensable to their rise and progress, it would be as immoral as it would be easy for a state university to bend them to its uses. But, even if the state universities should readily consent to these self-evident truths, are they in a condition fit for mutually beneficent relations of affiliation? Is it not very naïve to assume that the organization and management of the college part of these institutions are controlled by college consciousness? Seen from the viewpoint of an educational institution, the lower half of what was once the college appears often to be neither educational nor institutional. We behold a conglomerate of departments pursuing a hodgepodge of aims. In one department the student still happens to be regraded as an end; in many more he is a means; in a third the ruling passion is the protection of department industry. A large proportion of the instructors are novices, trained solely, not for secondary or college work, but for highly specialized research; many, too, are forever debarred from gaining professional insights by the great university superstition that to know is to be prepared to teach. Add to this the general underlying assumption that all Freshman and Sophomore studies are preparatory, not in the sense in which three good meals today

Digitized by Google

are preparatory to three meals tomorrow, but in a technical, professional sense, and one can hardly shake off the fear that the junior colleges, instead of saving and perpetuating college aims and ideals, will succumb to universitizing influences and introduce pre-legal, pre-medical, pre-engineering, pre-Ph.D. courses, all of them naturally dominated by the universities, while pro-student courses will be rare—too rare to do much for the vocation of becoming human.

There is thus precious little that would justify university pharisaism and a great deal to call for the attitude of the publican. At this point we may well say, *His opus, hic labor est.* Fortunately the universities, if they are to thrive as universities, need the junior colleges just as much as the junior colleges need articulation with universities. For this reason alone, if there were no others, I am optimistic enough to believe that, while the junior colleges will be influenced for the good of all concerned in the direction of adequate standards of scholarship, the universities, influenced in turn by the junior colleges, will recognize in the work of the Freshman and Sophomore years the continuation and culmination of secondary education and will reshape themselves accordingly. One desideratum of such re-forming would be, of course, the appointment of professionally trained college professors to replace the inexperienced instructor, who now has neither a living wage nor the work he wants to do and is prepared for. At the University of California an interchange of instructors between junior colleges and the University has been sanctioned already, and I do not believe I am overtaxing my imagination when I think of the possibility of calling distinguished junior-college teachers to college chairs at Berkeley; and of course not only for services to Freshmen and Sophomores. At any rate, if what I called a while ago the higher union of German and English university aims—an American union, for short—is ever to be brought about for the senior college or, if you prefer, the first two years of a university, graduate schools of the German type must cease to be the only source of teacher supply.

If we turn now for a last moment from the state-supported and state-controlled school agencies to those serving the same ultimate ends of progressive national preparedness without the advantages

Digitized by Google

and disadvantages of such support and control, we find, I think, instead of divergence of interests with respect to junior colleges, only the same good reasons for promoting them and for making the changes necessary for educationally organic articulation. He who runs may read the significance of the fact that the state university of California and the University of Chicago have been on the road, side by side, to the same goal these many years, and that they have been joined in word and deed by another pair of the same sort, Leland Stanford Junior University and the state university of Missouri. We find, furthermore, that the non-state university-colleges can move faster, if they will, than state institutions. Stanford, for example, has put a limit on the size of its Freshman and Sophomore classes and may of course, if it chooses, do away with them entirely. As for the first-class colleges—long may they live, and God bless them—their noble ideals of the higher education alone should guarantee their allegiance to the junior-college idea. How little they have to fear is well illustrated by Pomona College, which, although situated where junior colleges are at present over-abundant, has had to do as Stanford has done in the matter of numbers. This fact tends to show, incidentally, how very subordinate the causal connection is between the presence or absence of established higher institutions of learning and the demand for public junior colleges. The same college illustrates also how the older aims and methods of a more or less static culture may be transformed into the aims and methods of a modern dynamic education and how in consequence the differences between the last two college years and the first two university years tend to become differences of emphasis merely, while the line represented by the Bachelor's degree tends to become imaginary for those going on to universities for professional training whether of the research or of the applied-science type.

And so I, for one, cannot but hold to the faith that the junior college will be accepted by the nation and will be wholesomely developed as an integral part both of the system of public education and of the larger house with many mansions, American education, to the building of which must be devoted many gifts but one spirit.

Digitized by Google

CO-OPERATION BETWEEN ANCIENT HISTORY AND ENGLISH

ELSIE GARLAND HOBSON
The Mary C. Wheeler School, Providence, Rhode Island

It is a commonplace that history and English admirably supplement each other, but it is open to question whether the greatest possible advantage has been taken of this fact in planning high-school courses in the two subjects. There is abundant available reading-matter which has historical value as well as literary significance and which is quite as well worth reading as many of the "English classics" already in the reading-lists. Indeed, some of the books now commonly read may serve the purposes of history as well as of English if read from that point of view. Moreover, historical material affords excellent subject-matter for oral and written expression, for the pupil has something definite to say, and this he must needs learn to state clearly and with precision. Further, there is ample opportunity in teaching history to help the pupil to establish the desirable habit of reading rapidly, intelligently, and with discernment.

The plan of work hereinafter set forth has been adopted in the belief that by making the most of the possibilities of these two subjects a certain number of recitation periods per week can be saved while meeting all legitimate requirements. In view of the many subjects which clamor for attention, a saving of even two periods a week for one year is worth some consideration.

In order to forestall obvious criticisms, it may as well be stated at once that the validity of the method of procedure here suggested has not been subjected to scientific investigation and is not verified by irrefutable statistical data. Nor has it been under observation long enough to draw final conclusions as to its ultimate success. The only statement to be made at present is the unscientific one that the plan seems to work well. It is therefore offered rather as a suggestion than as a certified specific. This, however, may be

Digitized by Google

said, that the present arrangement was not made as the result of sudden impulse, but has been a matter of gradual development.

Three years ago in making some slight rearrangement of the work in English it seemed logical to put the required reading of the *Iliad* and the *Odyssey* in the same year as the course in Ancient History, to select other reading-matter which should preserve the unity of the year's work, and to make it all contribute as much as possible to the course in history. At the same time the duty of the teacher of history toward training in the vernacular was recognized, and definite plans were adopted for co-operation between the teachers of English and of history for maintaining the same standards in speech and writing in both classes.

At the close of the school year the question arose whether, in view of the demands upon the curriculum, too many hours were being devoted to this particular type of work. It seemed clear that the work done in the English class had contributed enough to the history course so that we could well afford to drop one period a week from the latter. After another year's trial a second period was cut out. The time thus saved has been utilized for a two-hour course in science following the general science of the preceding year.

The plan of work now in force is briefly as follows: The time set apart for Ancient History and English in a given year has been reduced from seven to five periods a week; two of these five recitations are conducted by the teacher of English, three by the teacher of history; all of the reading done in connection with the English work is made tributary to the course in history; the use of correct English in speech and writing is as much a requirement for the history class as is a knowledge of certain historical facts. In both classes a definite effort is made to develop the ability to read rapidly, discriminatingly, and thoughtfully. The year's work as a whole must satisfy the demands of both departments for the required work of the given year.

Since the organization of the school differs somewhat from that of the conventional four-year high school, it is desirable to make clear the program conditions under which this plan has developed and the scope of the English work in the course. The school is organized on the basis of a seven-year elementary and a five-year

Digitized by Google

upper school. The first year of the upper school corresponds rather closely to the first year of a high school. Pupils who have completed eight grades of the public schools enter this class, and the year's work includes, among other subjects, beginning Latin, first-year correlated mathematics, and general science. The modal age of the first-year class in September, 1916, was thirteen years. A total of fifteen periods is given to English during the five years of the upper school. They are distributed as follows: first year, four periods; second year—the year under discussion—two periods; third year, three; fourth year, two; fifth year, four.

A brief statement of the English course in the first year will serve to indicate the point at which the second-year work begins. Ability to write legibly, to spell correctly, to use capitals and periods in their proper places, is prerequisite to entrance to the upper school. In the first year short oral or written themes are prepared weekly. Attention is directed toward insuring the habitual use in speech and writing of correct and complete sentences. The class is introduced to the use of the topical sentence in its relation to the paragraph and has some practice in making outlines. The reading for this year includes three of Shakespeare's plays, three of Scott's novels, selections from English and Scotch ballads and from Malory's *Morte d'Arthur*. It is done primarily with a view to stimulating the pupils to read in rather large amounts and to read for pleasure. Critical analysis of literature is not attempted until the third year.

As has been said, it is in the second year that the courses in English and history are combined. In this year the study of paragraphs and the making of outlines are continued. Pupils are expected to acquire a more flexible sentence structure, to be able to use the necessary punctuation for such sentences, and to make a conscious effort to increase their vocabulary. The reading for the year will be spoken of later.

The history course for this year covers the period usually included in a high-school course in ancient history—namely, from earliest times to 800 A.D. Pupils who have entered from the lower school already have some familiarity with mythology and with classical names and places through the use of such books as Burt's *Odysseus*, Harding's *Greek Gods, Heroes and Men*, Bulfinch's *Age*

Digitized by Google

of Fable, and elementary texts dealing with the European background of American history. Moreover, for the summer following their first year in the upper school they are given a list of prescribed reading which includes A. J. Church's *Stories from Herodotus* and *Greek Life and Story*, and Lytton's *Last Days of Pompeii*. No effort is made in their second-year work to teach detailed political history or the minutiae of constitutional development, but knowledge of an outline of important events is considered necessary as a framework for the study of specific periods. The objective point of the course is a knowledge of the life of mankind in its industrial, commercial, social, and artistic aspects at various times and in different lands. A consideration of the conflicts of nations with each other in the process of expansion and of their civil dissensions is not, however, wholly relegated to the background. It would scarcely be possible today, even if one wished, to ignore the great conflicts of the past, and one may, according to her temperament, emphasize the horrors of war or the ignominy of tame submission.

In all the work in history a constant effort is made to put in practice the principles of English in which the pupil has been trained, by insisting that oral and written recitations be made in good form, that complete sentences be used, and that ideas be accurately expressed. The pupils are encouraged to make a conscious effort to enlarge their vocabularies by studying the meaning and derivation of new words and by making a point of using them. The study of paragraph structure, begun in the previous year, is carried on both in reading and in writing. Outlines are made, sometimes in class, sometimes as outside work. Written work is corrected by the English teacher or by the history teacher, or by both. In any case it is corrected for both English form and historical accuracy.

As for the reading which is assigned to the second-year English class, the plan is that the first semester be spent on reading which pertains to Greek history, the second on that which pertains to Roman. In actual practice there is a tendency to devote more time to the Greek because of the greater interest of the Greek literature and because of the fact that few of the class will probably read any of it in the original. The first two months are given to reading the *Iliad*, Books ix, xiii, xiv, xv, and xvi being omitted. A little

Digitized by Google

less time is needed for the *Odyssey*, although only the first four books are omitted. The translations of Lang, Leaf and Myer, and of Butcher and Lang are used. For each lesson one or two books are assigned to be read outside of class. The story of these books is told in class, selected passages are discussed and sometimes read, stories of mythology are reviewed, and advance work is done by oral or by silent reading.

When the *Iliad* and the *Odyssey* have been completed, several Greek plays are read. The translations of Jebb, Morshead, and Murray are used as far as possible. Those tragedies are selected which tell the stories of characters who have appeared in the Homeric poems. This year the class read the three Aeschylean tragedies of the *House of Atreus;* the *Philocteles* of Sophocles; and the *Trojan Women*, *Iphigenia in Aulis*, and *Iphigenia in Tauris* of Euripides. The *Antigone*, the *Medea*, and the *Bacchae*, although not connected with the characters of the Homeric poems, were suggested and were read by many of the class. The plays are assigned so that each girl reads at least six or seven. Some read them all. The recitation period during the reading of the plays is devoted to short talks about the different plays given by members of the class and to the informal discussions which such talks naturally arouse. From books and pictures the class learns something about Greek and Roman theaters and modern reproductions such as those at Berkeley and Detroit.

The thoroughgoing classicist may think that to read Greek plays in translation is almost desecration, while our friends who aspire to prepare the pupil for his life's work "without teaching him one superfluous thing" will doubtless consider such reading a waste of time. But in our three years' trial the pupils have never failed to devour them with such avidity that the program seems justified, if only from a hedonistic standpoint.

While the reading of these translations has been in progress several English poems in classical themes have been assigned for outside reading or have been read in class, among them Tennyson's "Oenone," "Ulysses," "The Lotos Eaters," and "Tithonus," Arnold's "Palladium," and Andrew Lang's "Helen of Troy." If this seems like an overdose of classicism, at least

Digitized by Google

there is justification for it in the enthusiastic response from the pupils.

Throughout the reading of the epics the attention of the class is drawn continually to the passages which tell how the people of the Homeric Age lived and fought, how they sacrificed and buried their dead, what they wore, what sort of houses they lived in, and how they occupied their time. The assignment of topics on these points gives material for themes and opportunity for an elementary study of sources. The pupils are led to compare the manner of life at this period with what they have learned in their history of the life of the oriental nations and of the Greeks in the Aegean Age and in the great period of Greek history. For securing material for comparison they use Baikie's *Sea Kings of Crete*, much of which has been assigned for outside reading in connection with the history class, and such books as Davis' *A Day in Old Athens* and Gulick's *Life of the Ancient Greeks*.

The reading for the second semester, which is associated with the study of Roman history, has varied somewhat from year to year. Macaulay's *Lays of Ancient Rome* are suggested as outside reading, for, while it must be admitted that they can be classified neither as literature nor as history, they are stirring tales, and it seems a pity not to have a speaking acquaintance with "false Sextus" and "brave Horatius." Shakespeare's *Julius Caesar* is an obvious choice. The class finds time in connection with its work in history to read A. J. Church's *Roman Life in the Days of Cicero*, together with selected passages from Suetonius, Merivale, Froude, Oman, Boissier, Momsen, and Warde-Fowler on the characters of Cicero, Pompey, and Caesar. As one of the class exercises this year the pupils were asked to write a theme comparing the conception of Caesar which they gained from the play with that which they gained from the historians, and then to add their own personal judgment about him. Since more than half the class will read some portions from the works of Caesar, Cicero, and Vergil in their Latin course, it is not thought desirable to give time to them here. We tried Plutarch's *Lives* one year, but the class objected to the English style in the only text available which contained the desired *Lives*, so Plutarch was relegated by unanimous

Digitized by Google

consent to the optional list. This year the class will read in the last six weeks of the term Tucker's *Roman Life in the Days of Nero and St. Paul*. This will be supplemented by Fowler's *Roman Life in the Republic*. While reading these books the class will have the opportunity of comparing the life of republican and of imperial Rome and of recalling what they earlier learned about Greek life.

The reading of the class is not confined exclusively to books which have attained a position of dignity on the library shelves. Articles in current papers and magazines which deal either with ancient times or with events now taking place in those regions which were included in the ancient world are occasionally assigned for outside reading or for class reports. The *Atlantic Monthly*, the *Geographic Magazine*, *Art and Archeology*, and the *Outlook* are among the magazines that have been made use of in this way. The pupils take a lively interest in bringing to class clippings from newspapers or quotations from their other reading which contain allusions of any kind to the various matters which they are studying in class.

To those teachers in the background of whose consciousness always looms the specter of college-entrance requirements the question will at once present itself whether such a course will meet these demands. Will it count for one unit of history, or one unit of English, or three-fifths of one and two-fifths of the other? In the latter case what becomes of the required unit of history which the course in ancient history so often satisfies? Is the required ground actually covered? For formal accounting it seems best, under the present system of credits, to count it as one unit of history and to let the English work of the other four years, which amounts to twelve periods, stand for the required three units of English. At frequent intervals this year tests in history have been given similar to the tests given last year and the year before, and there has been nothing to indicate that the class is less well prepared to meet them than formerly. Neither does it appear that the pupils are in any way handicapped in English. It is permitted to hope that the time will come when instruction and practice in the correct use of the vernacular may be taken for granted, legitimately, in connection with all school work and when the hours

Digitized by Google

required to be devoted exclusively to the study of literary English may be shortened.

It has been stated that this work is at present divided between two teachers. This has the advantage of making the pupil conscious that the two subjects are not isolated in water-tight compartments. There is something to be gained from having two instructors emphasizing the same things at the same time. There is, however, no reason why it could not be done by one teacher, provided she is generally intelligent and has not specialized so extensively that she is unable to see anything beyond her chosen subject. It seems not too much to require that everyone who aspires to teach history be able to give instruction in English and have some literary appreciation, and that every English teacher have sufficient historical background so that she can at least prepare herself to teach a course of this kind without any great hardship if the occasion arises.

A first-hand knowledge of Greek and Roman literature on the part of the teacher is obviously desirable. If this is too much to hope for, she should at least take the advice of competent judges in selecting for class use and for her own reading translations which have recognized literary merit and which have preserved in a large degree the classical spirit.

Digitized by Google

AN EXPERIMENT IN THIRD-YEAR ENGLISH

H. V. CHURCH
J. Sterling Morton High School, Cicero, Illinois

In these days in every high school the English course occupies the focal position in the curriculum. One who experiments in English has set his foot upon sacred ground; or, better, he has ventured into that inter-trench zone where every position taken must be well defended. The great war today is waged over the question whether composition and literature shall go hand in hand or be divorced. One can hardly hope to bring peace by suggesting a combination of composition, literature, and history. Yet in our experiment we made bold to do this, and in our effort to correlate the courses in literature and history we fused third-year composition, American literature, and American history. American literature lends itself to this device because of the narrow range, the small amount, and the simple grade of most of the material. The movements in American history offer few difficulties because they are simple, short, and clear. A fine basis for both forms of composition is found because the material is entertaining, informing, and inspiring. To a citizen of this country the whole body of material is of high social value.

In the orthodox high school American history is an elective. Everyone believes that all high-school pupils should study American history, but the enrichment of the secondary-school curriculum and the demands of college entrance have made this course an elective that is elected by few. With third-year English required and American history and American literature as the meat and bone of the course, one has the satisfaction of knowing that the history of one's country is not neglected in high school. The Senior is now required to study English a fourth year, and, since our experiment with third-year English proved successful, a combination course of fourth-year composition, English literature, and English history

Digitized by Google

was the logical outcome. This latter course has now run two years and will not be abandoned.

Each of these two courses should be conducted by one teacher. The third-year course is almost sure to be a successful one for any live teacher of English who has carried a minor in American history. A teacher with the normal amount of resilience has a capital time in this course. There is a wealth of material in the history and in the literature, so that every report and almost every fluent recitation gives material that is new to every member of the class. Interest is keen and spontaneous. The experiment would be a failure if one teacher conducted the English and another the history. It is not a course to be divided between two teachers. The material, both history and literature, reacts and interplays too closely to warrant any separation.

The class meets five times a week, and the course is not looked upon as an easy one. With the excess of written work—more than other English courses because of the notebook—an unusually large amount of oral composition, and the heavy requirement of the collateral reading both in literature and in the secondary history books, the year's course demands hard work. The text is Muzzey, *An American History.* Cairns, *Early American Writers;* Bronson, *American Prose;* Page, *Chief American Poets;* Foerster, *Chief American Prose Writers;* Long, *American Literature,* are handbooks in which the pupils must read constantly. Enough copies of these books are at hand so that no one is handicapped for lack of material. Samples of outlines follow:

SLAVERY AND THE WEST

1836–50

A. THE GATHERING CLOUD
1. Slavery
   a) Introduction
   b) Growth in the eighteenth century
   c) Views of:
      (1) Antislavery North
      (2) Humanitarian in South
      (3) Question of profits

Digitized by Google

2. Missouri Compromise
   a) Slavery question, 1819
   b) Louisiana Treaty
   c) Power of Congress disputed
   d) Compromise
      (1) Elements
      (2) Significance
      (3) Slavery a moral issue
      (4) Growing importance
3. Abolitionists
   a) Garrison
   b) Turner's insurrection
   c) Antislavery *v.* abolition
   d) North driven toward abolition

B. Texas
1. Later expansion
   a) Connection with slavery
   b) Mexican province
      (1) American influence
      (2) Independence
      (3) Attempts to purchase
2. Oregon
   a) Claims
      (1) Grey
      (2) Lewis and Clark
      (3) Astor
   b) "Fifty-four forty or fight"—boundary dispute
3. Annexation renewed
   a) Politics
      (1) Tyler read out of party
      (2) Webster retired
      (3) Whitman
   b) Growth of sentiment
   c) Treaty rejected
   d) Annexed by joint resolution
   e) State organized

C. Mexican War
   a) Taylor in Rio Grande
   b) Mexico City
   c) Treaty
   d) Questions remaining
      (1) Wilmot proviso
      (2) Squatter sovereignty
      (3) Gold in California

Digitized by Google

1840–76

I. PERIOD OF AGITATION
- A. Political
- B. Mental and spiritual
  1. Social reforms
  2. Communistic societies—Brook Farm
  3. Transcendentalism
  4. Study of foreign languages and literature
  5. Establishment of lyceums
- C. National and sectional literature

I. POETS AND ESSAYISTS

Emerson	Page—*Chief American Poets* Good-Bye; The Rhodora; Each and All; Concord Hymn; The Humble-Bee; Woodnotes, I; The Snow-Storm; Fable; Forbearance; Threnody; Hamatreya; Give All to Love; Boston Hymn Foerster—*Essays* (1) Nature, sec. 1; (2) American Scholar, sec. 2; (3) Compensation, pp. 390–91
Thoreau Prose (non-fiction)	*Walden*, 1 chapter; *Economy*, last half; *Sounds*
Hawthorne Prose (fiction)	One novel One story from *Wonder Book* One legend
Whittier	*Reform:* Laus Deo; Ichabod; Massachusetts to Virginia; The Christian Slave; The Farewell of a Virginia Slave Mother *Legendary:* Skipper Ireson; Abraham Davenport; Barbara Frietchie; Cassandra Southwick *New England life:* Snow Bound; Poor Voter on Election Day; Huskers; Last Walk in Autumn
Lowell	Stanzas on Freedom; Columbus; The Present Crisis; Vision of Sir Launfal; The First Snowfall; Ode Recited at Harvard Commemoration; Ode Read at One Hundredth Anniversary of the Fight at Concord Bridge; *Bigelow Papers*

Digitized by Google

A week's work in this course is as follows: assignments in the history text; collateral reading in secondary books of history of a minimum of twenty-five pages; literature assignments which use the history as a background, equivalent to about fifty pages; and written work, which consists of writing up oral reports given in the daily class work. Each pupil reports orally to the class on subjects not treated in the textbook. Some forty or fifty of these reports are given each month by the class, and this makes a minimum demand on the pupil of two reports a month. Two reports a day on the average are given in class. The reports are always sure to be listened to because of the new material they contain; and, furthermore, interest is almost coerced because each pupil is required to take notes on these reports and expand the notes into paragraphs or outlines for the notebook. The teacher scans the notebook with the same care which he gives the other written work of the department. Besides the writing up of the notes from the pupil reports in class, three 700–1,000-word themes on collateral subjects are required each semester. In addition four home-reading books are required—two from the field of fiction, the third a biography, and a fourth that treats of the life of the people. These are the suggested readings for the first quarter of the year:

COLONIAL PERIOD

FICTION	NON-FICTION
Boy's Drake, Bacon	*Elizabethan Adventures*, Earle
Scarlet Letter, Hawthorne	*Child Life in Colonial Days*, Earle
Merry Mount, Motley	*Home Life in Colonial Days*, Earle
Pocahontas and Powhatan, Eggleston	*Old Quebec*, Parker
Green Mountain Boys, Thompson	*Story of the Trapper*, Laut
Tales of New England, Jewett	*Pioneers of France, La Salle and Northwest*, Parkman
Standish of Standish, Austin	*Story of the Indian*, Grinnell
Audrey, Johnston	
To Have and to Hold, Johnston	
Black Shilling, Barr	
White Apron, Goodwin	
Grandfather's Chair, Hawthorne	
Alice of Old Vincennes, Thompson	
Seats of the Mighty, Parker	
Barnaby Lee, Bennett	
Trail of the Sword, Parker	
Story of Tonty, Catherwood	
Lazarre, Catherwood	

Digitized by Google

One who believes in the spiral construction of a curriculum can see his ideals consummated in this plan, for American history is often found in the early grades of the elementary school in story and hero form, and is met with again in the eighth grade in the narrative form, and appears for the third time in the eleventh grade in the industrial, social, and institutional form plus the attendant literary movements. Thus the field of American history is traversed three times. Now, certain advantages are obvious in the foregoing spiral treatment when it is compared with the procedure usually found in secondary schools. Many high schools have a course in American literature in one of the four years of the high-school curriculum. Along with this study of American literature goes a review of American history for the sake of background, and, no matter in what year the study is pursued, the narrative treatment of the history usually obtains. This is often, if not invariably, a wearisome repetition of the eighth-grade history work. It is perfectly patent that such a combination course as is shown above is far more interesting because the history is approached from a new angle. Again, in most high schools there is a United States history course pure and simple, but the handling of this course, which is usually given in the third or fourth year, is largely in narrative form, with rarely traces of other treatment. Such a course must endure the handicap of irksome repetition throughout its length; on the other hand, our experiment brings a newness that wins the interest and a wealth of inspiring material that enlists the enthusiasm of the students.

In the consideration of these courses from the standpoint of the student, the question at once arises: Which shall be credited, history or English? The courses are offered as English III and English IV and are so credited. Both courses are required seriatim of all who have survived English II, the second-year English course. With four years of English to one's credit one is well prepared to offer for college entrance three years of English, and to offer English history or American history as his chosen college may demand. He is prepared to jump either way and yet will have no difficulty with Freshman college English.

To the teacher who has handled history classes in the old-line way the combination course is a pleasanter task chiefly because of

Digitized by Google

the increased interest of the pupil. This increased interest is effected partly through the wider reading required of the pupil and partly through the clearer notions that come to him of the development of the literature out of the history. The reaction and correlation are very close. To prove that a clear conception of the development of the one out of the other is obtained by the pupil is difficult, but the fact always remains that the pupils look upon the course as more interesting and more entertaining than the other English courses they have taken.

Digitized by Google

A CRITICISM OF RECENT ATTEMPTS TO MEASURE LANGUAGE ABILITY

BAKER BROWNELL
Battery One, Officers' Training Camp, Fort Riley, Kansas

Further progress in language scales depends to a great extent on an analysis of the term language ability. The term is used to cover generally that which is measured by scales, such as Trabue's[1] completion test language scales, Starch's[2] grammar and punctuation scales, and on the other hand the Ballou[3] and Hillegas[4] composition scales, without careful distinction or recognition of the different kinds of material included. Working on the assumption that a child's language ability corresponds to the concrete result of his activity in composition, namely, his theme, investigators have proceeded to measure language ability by attempting to evaluate these concrete results and to derive scales by arranging in ascending or descending order type themes of definitely assigned values. There are obviously great difficulties accompanying such an attempt—first, in determining what a type theme is; secondly, in the operation of scientific comparison between the type theme and the theme to be graded. Both have been dealt with for the most part by a statistical summarizing of teachers' opinions, which in this case is eventually a doubtfully scientific method. Where analysis has been used to any extent, it has been in determining what are or should be type themes, a question which is psychological and pedagogical in so far as it relates to the theme-writer's capacities, and statistical and objectively experimental so far as it refers

[1] M. R. Trabue, *Completion Test Language Scales* (Teachers College, Columbia University).

[2] Daniel Starch, "The Measurement of Achievement in English Grammar," *Journal of Educational Psychology*, VI, 615–26.

[3] F. W. Ballou, "Scales for the Measurement of English Compositions," *Harvard-Newton Bulletin, No. 2* (Harvard University).

[4] M. B. Hillegas, "A Scale for the Measurement of Quality of English Compositions," *Teachers College Record* (September, 1912).

Digitized by Google

to his themes. The operation of comparison of a theme with the scale has received little attention, an analysis and definition of which would undoubtedly react toward changes in the scale itself. The defining of this operation will also necessitate psychological categories, such, for example, as Kayfetz[1] suggests with reference to the derivation of scales. Secondly, the operation of comparison in any scientific degree depends on an analysis of the materials compared and a co-ordination of these analytical elements. The two materials to be compared in this case are the written language or composition of the child's theme and the language of the scale theme. Though there are also other comparable elements, no doubt, the actual language elements are the chief. Such an analysis, could it be carried out, must react with great effect on the nature of language scales.

There are, to repeat, these two operations necessary with respect to every language scale: the derivation of the scale and the using of the scale. While the derivation of scales has received a great deal of attention, the study of the using of scales has received little. Using the scale consists mainly in the comparison of a scale theme with a student's theme. This operation of comparison has been left relatively uninvestigated and unanalyzed. At least one necessity of scientific comparison is, as before said, an exact analysis of the materials compared. This means that language, with respect to language scales, cannot be taken uncritically, or generally, or only vaguely evaluated and analyzed, as in the past, and that language cannot be treated as a single and undifferentiated whole. Development of language scales and more particularly the use of language scales depend on a uniform and systematic analysis and evaluation of language elements.

Language—and, much more, language ability—is from an important aspect a collective term. The multiplicity of the content of the term language has been and will continue to be, until appreciated and definitely analyzed, a source of intellectual chaos in any set of scales that can be devised. Though the term language is unified by the fact that all language has one general function, it

[1] Isador Kayfetz, "A Critical Study of the Harvard-Newton Composition Scales," *Pedagogical Seminary*, XXIII, No. 3, p. 339.

Digitized by Google

is not less important to note that language is composed of many and very different groups of elements foreign to each other except for their participation in the common function of human communication. Leaving the further complication introduced by the word "ability," language alone from the point of view of the maker and especially the user of language scales has difficulties of analysis hitherto untouched. The meagerness and generality of the quite unsystematic notes, which are all that the Ballou scale gives for comparing the pupil's theme with the scale, illustrate this lack of analysis. The language has been left unanalyzed, merely the subject of general opinion. With few exceptions language scales have used language as a lump term including various and vague component materials. The term language has been used from the standpoint of its definition as to function, not from its definition as to content and language structure.

Trabue[1] is willing to admit frankly that he does not know what language ability is, but believes that his scale measures this language ability, whatever it is, fairly well. The logic of his method as of that of Ballou and Hillegas is clear from such a statement. These scales are attempting to measure the purely functional aspect of language. They are attempting to measure a child's ability to use language, his ability to make language perform its function, regardless, not only of what ability is, but of what definitely language is. It is an empirical method. It can merely correlate a child's performance with some type performance. What it is that he performs, what the materials of his performance are, whether two children are performing the same thing, is unanswered. Though specious results are obtained, they can by this method be founded only on intellectual confusion. It is educational herb doctoring, a method which cannot go far in science. Some analysis of the content of the term language from the point of view of the language scale is necessary.

Special experimental study of one of the composition scales with reference to its adequacy as a means of measuring a child's language in written composition was carried out last year in

[1] M. R. Trabue, *Completion Test Language Scales* (Teachers College, Columbia University), Introduction.

Digitized by Google

connection with the bureau of measurements at the Kansas Normal School. In the study[1] it was found that language measurement by the empirical method used in composition scales was not only inadequate and inapplicable as an analytical designation of measurable errors and defects in composition, but that the scale did not survive an empirical test similar to that used in its production aiming to test the scale in its ability to measure the functional success of language. The scale failed, in other words, not only to measure language ability with reference to the content of the term; it failed equally in measuring it with reference to function. The twenty-five opinions from Kansas did not agree with the twenty-five opinions from Massachusetts as to the relative successes of the compositions in fulfilling their function. This failure was found to be due, first, to a lack of analysis of those elements in composition which were to be measured, an analysis necessary in order to give a common ground to teachers in the operation of comparing the child's theme with the scale; and, secondly, to a lack of coordination of these elements.

Such scales evidently do not express the quality of themes, as Hillegas says, in the same sense, though not so accurately, as millimeters express the length of lines. While a line is an absolutely simple analytical unit, having but one characteristic, length, with which a millimeter, a perfectly simple statement of abstract value in terms of length, can be repeatedly placed in one-to-one correspondence, thus measuring the line, these scales are composed of themes, quite unanalyzed as to language and necessarily complex—themes which have a multiplicity of variables within them, and which as wholes cannot be placed in one-to-one correspondence with other themes. When one teacher, for example, gives more weight to an error in grammar than to an error in spelling, when another believes that good thought will carry over many an error in spelling or punctuation, when another is impressionable to elegant sentence structure and another to choice of words, how, when all these elements and others are present unanalyzed in the scale theme, can this theme be set in one-to-one correspondence with another as a

[1] Baker Brownell, "A Test of the Ballou Scale of English Composition," *School and Society*, IV, 938–42.

Digitized by Google

means of quantitative measurement? The fact that all these elements and many more must be organized together to make language perform its function gives no basis to the assumption that a scale by lumping them all and proceeding to judge by general effect can successfully measure language ability. Scales cannot proceed by throwing all variables into one dish and measuring them in the mass. They cannot proceed in this way because variations in general effect may depend successively on quite different variables left undistinguished within the mass, thus making quantitative comparison, a necessity of measurement, impossible. A scale can successfully measure but one variable at a time; if more, the interrelations of the several variable elements must be known. A measurement of general effect, however, measures neither the elements nor their organization. Until it is known precisely what composes general effect there can be no success in standardizing it or in using it as a basis for comparison with children's themes.

Thorndike[1] notes a similar analogy in language measurement. One inch, he says in effect, is said to be equal to another inch ultimately because of statistical evidence empirically derived by expert opinions. With respect to English writing, he says: "The only logical difference between equating the two lengths and equating the two specimens of writing [is] that the variability of expert judges in the latter case is so great." This quite ignores, however, the many types of variability, not only in judges, but in English writing—itself a fact which makes the analogy exceedingly questionable. An inch is an analytical unit. A comparison of inches can be made only on the basis of exact knowledge of the analytical content of inches. This content is known by the judge to vary in only one possible way—namely, in length—while in true inches he knows that it varies not at all. The inch is an abstract and artificially simple magnitude with which other inches can be put into simple correspondence with a possible variation of only one type, namely, length. To this an English theme is far from analogous. An English theme is concrete and, so far as can be determined, has

[1] E. L. Thorndike, "A Scale for Measuring the Merit of English Writing," *Science*, XXXIII, 935.

Digitized by Google

not, like the inch, an absolute, analytically simple, objective standard of merit to which an expert judge may refer for comparison. The theme has a manifold of variables and of types of variability within it, left by Thorndike, as by Hillegas, unanalyzed. These as aggregates cannot be compared quantitatively with each other because they cannot be put into simple correspondence. While the judges of inches necessarily have a uniform scheme of valuations, the judges of themes, so long as the theme material remains generally complex, unanalyzed, unco-ordinated, and without exact definition, can have no uniform system of valuations. The difference is between specific analysis and general effect.

General effect is the loosest and most nebulous of terms. Not only does it depend on various rhetorical parts which the science of rhetoric, if it be science, has long tried to analyze; it depends also on variable human receptors. For the purposes under consideration—namely, for the purposes of scale using as well as scale derivation—the rhetorical elements and the human receptor both remain unanalyzed and unevaluated. W. S. Monroe, in summarizing recent work in composition in the Bureau of Educational Measurements and Standards at the Kansas Normal School, states that investigations show that chaos prevails in composition scale work owing to lack of adequate analysis. It may be safely said that the next future of the language scale will be an analysis of the elements necessary to the comparison of themes and to scale derivation; it will be the analytical phase.

Analyses of language with respect to its amenability to measurement are at present valuable, not so much in defining for scale use the final elements of language as in denoting some of the complexities and problems in this field that must be met by those who will progress to a scientific basis for composition scales.

As a tentative definition for experimental purposes the following may be used: Success in the use of written language depends on the ability of a writer to relate his words to a reader in a way that affects the reader according to the writer's intention. This possibly may be termed a behaviorist or, better, a Freudian definition of language in so far as it attempts to eliminate the "transmission of

Digitized by Google

ideas" notion of language. The hypothesis of language as a symbolic vehicle somehow capable of transporting a fixed content of consciousness from one mind to another is here given up. This greatly disarranges the orthodox "form-content" analysis of language, and perhaps destroys it. It necessitates at least a treatment of the "form-content" relation from a different basis.

The relations of language to the reader may be divided in general into two classes. The first class includes those formal elements of language, such as grammar, spelling, and punctuation, the relation of which to the reader is definite and precise and requires a response or judgment of merit, which, so far as it relates merely to these forms, is fixed and predictable of all literate persons. The second class includes, not only the elements of rhetorical form proper, but language-content, called the thought or the material which people say language transmits. The relation of the second class of elements to the reader is variable, resulting in an effect that is uncertain and relatively unpredictable owing either to inherent lingual plasticity or to ignorance of the complexity of the laws governing the case. Toward elements in this second class the reader's response or opinion of merit is only indirectly or tentatively predictable.[1]

These variable factors of language are the more important and obviously the most difficult to identify and measure. The fixed elements of language are at once easier to measure and have importance only as instrumentalities.

Although language analysis as a basis for scales has advanced little beyond this primary division into the fixed and variable elements of language effect, and that unconsciously, indications are that this is merely the beginning of the necessary process. Isolation of the fixed elements of language has proceeded to the extent that there are now punctuation scales, grammar scales, and spelling

[1] Future analysis of these variables may determine whether or not Thorndike ("Notes on the Significance and Use of the Hillegas Scale for Measuring the Quality of English Composition," *English Journal*, II, 554) is right when he suggests that there is ideally an objective absolute of merit for an English theme which standardizes all others; and only analysis of these variables, not opinions of their aggregate, can determine it.

Digitized by Google

scales.[1] Though it is somewhat doubtful whether spelling can be included as an element of composition, since composition takes cognizance of no unit less than the word, its inclusion among the fixtures of language can cause no trouble, since it is always measurable without reference to other elements of formal composition. It can be graded as to difficulty in an independent scale. The question concerning it is to what degree spelling ability should be included in an estimate of general language ability. Grammar and punctuation, unlike spelling, are closely correlated—so closely, indeed, that there is doubt whether they are essentially distinct. The measure of ability in punctuation is directly related to the complexity of grammar and grammatical sentence structure in any one instance. A child who uses complex but good grammar and fails in punctuating probably cannot be graded with a child whose elementary grammar makes punctuation easy. Spelling, punctuation, and grammar are all three, for that matter, related so intimately to the "thought-content" that theme measurement by scale becomes somewhat complicated. Undoubtedly some types of thought put more strain on these three elements of language than other types.

The following remains true of spelling, punctuation, and grammar, however: it is known definitely when they are wrong and when they are right. Any one of these must be judged always by the same criteria—its conformity to rule. Judging in this case, somewhat similarly to judging inches, becomes, not a matter of choice or personal selection, but a simple operation of noting deviations from a prescribed standard. The error, the nature of the error, and its correction are exact certainties. Literate persons know whether or not language is grammatical, properly spelled, and, usually, properly punctuated, and this response of theirs is fixed and in any special case definitely predictable. The only variabilities which these elements of language can show are those which break the rule. Based, as they are, on clear and arbitrary conven-

[1] For example, L. P. Ayres, *The Measurement of Spelling Ability* (New York: Russell Sage Foundation); Daniel Starch, "The Measurement of Efficiency in Spelling," etc., *Journal of Educational Psychology*, VI, 3; "The Measurement of Achievement in English Grammar," *ibid.*, VI, 615; *Educational Measurements* (New York: Macmillan Co.).

Digitized by Google

tion without recourse to taste or choice, these three offer analytical simplicity to the scale-maker. This obvious fixity of standards is an important consideration and is the basis of this one of the two classes of language elements.

It is in the class of variable language elements that the scale-maker meets, not only the most important, but by far the most difficult, problem. Grammar, punctuation, and spelling are in effect merely limitations imposed by general rule on the writer. They are taken for granted, and for that reason their correctness, which is absolute merit in this case, directly affects the reader but little. Success in affecting a reader in a way intended by a writer depends far more directly on a writer's ability in those variable elements of composition which depend, not on fixed rule, at least not clearly so, but on choice, on free judgment and taste. At this point language aims not merely to be correct. A transposition is made from a criterion of internal correctness to a criterion lying in the success in relating language in some intended way to the reader —in other words, in getting it across. An analysis of these variable effects on a reader must be based, if any scientific scheme of measurement is in view, on an analysis, and to some extent an isolation, of these variable elements in language. Measurement of these variables may be attempted by comparing the exact and defined effect on a reader with the exact and defined intended effect of a writer, thus obtaining the ratio expressing language efficiency. But this is made most difficult and probably impossible by the fact that there can be no exact knowledge of the scope of a writer's intended effect except by his language, nor can the actual effect on the reader be accurately gauged, and certainly not designated except by referring definitely to those elements of language through which the effect is made. Measurement of these variables, to repeat, must rely ultimately on an exact analytical evaluation of the elements of language itself. While the whole matter is exceedingly complex, perhaps hopelessly complex, progress will depend, at any rate, on the possibility of language analysis, particularly the analysis of the so-called variable elements.

Digitized by Google

SCIENTIFIC PROGRAM-MAKING IN THE CENTRAL HIGH SCHOOL OF GRAND RAPIDS, MICHIGAN

ALICE M. JAMES
Assistant Principal

The usual method of making out a general program for the school and allowing pupils to choose for themselves their teachers and their hours of recitations was followed in our school until a few years ago. By this practice at least two weeks of the most valuable time of the whole semester, the two weeks at the beginning of the semester, were almost wasted by the necessary readjustments of pupils' daily schedules. With the choice of teachers and of hours of recitations in the hands of the pupils the classes of the most popular teachers, unless these classes came the last hour of the day, were full to overflowing, while those of the less popular, but possibly equally as good, teachers were nearly, if not quite, without students. Naturally most of this readjustment fell to me as assistant principal, and finally, after much hard thinking, I hit upon a scheme which has evolved into our present plan—a plan which has the hearty co-operation of every teacher and of every thoughtful pupil in the school, a plan which takes for its execution one day of the old semester instead of two weeks of the new one, and also a plan which can be adapted to any school, whether it is administered on the basis of large or of small session rooms, with or without heads of departments.

Our school is organized on the basis of principal, assistant principal, six session-room teachers, each having charge of two hundred or more pupils, heads of departments, and classroom teachers. In making the program for the semester each one of these separate divisions of teachers has a share.

The session-room teacher is responsible for the careful guidance of each pupil in his choice of studies. This latter work is of the greatest importance and takes more of this teacher's time than do

Digitized by Google

all of his other duties put together, though these duties are by no means inconsiderable. Beginning with the tenth grade, our session-room teachers work out with each pupil, subject to change, a sequence of studies for the remainder of his course. The following is a bona fide blank illustrating this phase of the work:

COMPLETE PLAN OF WORK

Name.... AYERS, JOHN.....Course.... LITERARY.....

hrs.		hrs.		hrs.		hrs.		hrs.	
	Eng. 1 Math. 1 Lat. 1 Hist. 1	20	Eng. 2 Math. 2 Lat. 2 Hist. 2	40	Eng. 3 Math. 3 Lat. 3 Bot. 1	60	Eng. 4 Lat. 4 Bot. 2	75	
hrs.		hrs.		hrs.		hrs.		hrs.	Units
	Eng. 5 Math. 4 Hist. A Span. A	95	Eng. 6 Math. 5 Hist. B Span. B	115	Eng. 7 Physics 1 Hist. 7 Span. C	135	Eng. 8 Physics 2 Hist. 8 Span. D	155	Eng. 4 Math. 2½ Lat. 2 Hist. 3 Span. 2 Sci. 2 15½

NOTE.—Univ. of Mich. Undecided between Engineering and Medicine.

Soon after the middle of the semester, sometimes even before that, the session-room teacher begins conferences with each pupil in his charge as to his selection of subjects for the ensuing term. After this conference each pupil is given a blank like the accompanying, which is filled out in ink and returned to the session-room teacher. These blanks are also sent to all pupils of other schools tributary to the Central, who expect to enter the Central for the first time at the beginning of the new term. These are made out under the direction of the teachers in these other schools. Notice that the same John Ayers has evidently proved a weak student in mathematics; has decided to put science in its place for the remainder of his course; will therefore probably decide on medicine for his life-work.

Monday or Tuesday of the week before the ending of the semester each teacher in the school marks these plans of work for

Digitized by Google

every pupil in her classes, in the columns P, C, N, or D—P for "passed"; C for "conditioned"; N for "not passed"; D for "doubtful." On Wednesday of the same week each session-room teacher reports to the assistant principal, on blanks furnished from the office for that purpose, the number of pupils in his session room

PLAN OF WORK

Name....AYERS, JOHN.....
.....Grade.....Class.....Course
For Term Ending....Jan. 26, 1917.....

STUDIES OF PRESENT TERM

Teacher	Subject	Grade	P	C	N	D
Miss Clay	Eng.	6				
Mr. Wilcox	Math.	4				
Miss Stout	Hist.	A				
Miss Elliott	Span.	A				
.....	.....	.....				
.....	.....	.....				

STUDIES PROPOSED

.....
English 7 .....
Mathematics 4 .....
History B.....
Spanish B.....
.....
.....
*.....Grade.....Class.....Course
For Term Ending.....

*To be filled out by session-room teacher.

who will be in each grade of each subject in the new semester, and also reports the number of doubtfuls in each subject. These numbers are compiled in the office. The heads of departments, who have already made out a tentative program for their respective departments, hand to the assistant principal a revised program based on these final numbers.

On Thursday the principal and his assistant sit down with these tentative programs to the business of making a complete program for the school; as on Thursday the semester's examinations also begin, it is possible to secure the necessary interviews with individual teachers with regard to various details of the program without seriously hampering the work of the school.

Digitized by Google

By the next Wednesday, the Wednesday of the last week of the semester, the program is complete, and the assistant principal, aided by the heads of departments, has prepared class lists according to the following blank:

Subj..English 7..... Hr..1.. Tr..Miss——..... R..222..... S.R....	Subj..English 7.....Hr..1.. Tr..Miss Ransom ..... R..234.....S.R....	Subj..English 8.....Hr..2.. Tr..Mr. Jones ..... R..665.....S.R....

The teachers have corrected the standings marked "D," so that the "Plan of Work" and "Class Certificate" for each pupil is complete. For example, that of John Ayers reads as follows:

PLAN OF WORK

Name....AYERS, JOHN.....
.....Grade.....Class.....Course
For Term Ending....Jan. 26, 1917.....

STUDIES OF PRESENT TERM

Teacher	Subject	Grade	P	C	N	D
Miss Clay	Eng.	6	P			
Mr. Wilcox	Math.	4			N	
Miss Stout	Hist.	A	P			
Miss Elliott	Span.	A	P			
.....	.....	.....				
.....	.....	.....				

STUDIES PROPOSED

.....
English 7.....
Mathematics 4.....
History B.....
Spanish B.....
.....
.....
*.....Grade.....Class.....Course
For Term Ending....Jan. 26, 1917.....

*To be filled out by session-room teacher.

Digitized by Google

CLASS CERTIFICATE

Name....AYERS, JOHN.....

This slip indicates the studies to which the student is entitled and must be presented to each teacher on the first day of the semester.

N.B.—Copy exactly, and in the same order, under "Studies Proposed" all that you have under "Studies Proposed" on "Plan of Work" blank.

STUDIES PROPOSED

English 7.....
Mathematics 4.....
History B.....
Spanish B.....
.....
.....
.....
.....Grade.....Class.....Course
For Term Ending....Jan. 26, 1917.....

Each of the fifty-odd teachers has been informed by a circular similar to the following of his exact place and his particular duty in the next business before the faculty—that of making out a schedule of classes for each one of the twelve hundred and more pupils in school.

Thursday, January 25
Making Programs
8:30 Sharp

Room 106 MR. SNELL

English	MISS CLAY
History and Music	MISS STOUT
Mathematics and Bookkeeping	MISS ELLIOTT
Languages and Manual Training	MISS WARING
Science and Drawing	MISS POWERS
Writing on board	MR. BRADFORD, A.M.
	MR. WILCOX, P.M.

The next day, Thursday, the last day but one of the semester, this work is begun at 8:30 A.M. The teachers who are to assist

Digitized by Google

Mr. Snell in Session Room 106 assemble in that room, secure and arrange their class lists of English, history, and so forth. Mr. Snell has ready the pile of "Plans of Work" alphabetically arranged, and the work begins, proceeding as follows:

1. Mr. Snell calls out the name on the first plan, "John Ayers."

2. Mr. Bradford writes the name on the board, or, if each teacher has been provided with a numbered alphabetical list of the names of all of the pupils in Mr. Snell's session room, with "John Ayers" as number "1," writes on the board that number. Either method insures the correct spelling of the pupils' names as teachers write them on the class lists as indicated below.

3. While the name is being written on the board Mr. Snell reads from the plan, "English 7, Mathematics 4, History B, Spanish B." This is done that each teacher will have his attention called to the name and the subject and be ready without loss of time with his assignment.

4. Miss Clay, who has the English lists in charge says, "English 7, 1–222," meaning that John Ayers will have for his recitation hour for this grade of English the first hour of the school day, in Room 222.

5. Miss Clay writes the name of John Ayers on the class list to which she has assigned him.

6. Mr. Snell writes after English 7 on the "Plan of Work," "1–222." And so on through the list of studies on the proposed plan.

When John Ayers' schedule is finished it reads as follows:

English 7	1–222
Mathematics 4	2–334
History B	4–214
Spanish B	6–116

Each of Mr. Snell's pupils, numbering 225 or more, has his schedule made out in a similar fashion, and all other session-room teachers in the building are at the same time working with their groups of teachers in the same way. The teachers who have the class lists see that the sections are kept as nearly even in numbers

Digitized by Google

as possible. The class lists in English 7 will read something as follows:

Subj..English 7 ....Hr..1..... Tr..Miss Clay ..... R..222..... S.R..106..	Subj..English 7.....Hr.2 ..... Tr...Miss Hayes ..... R..234.....S.R..106..	Subj.....Hr..... Tr..... R.....S.R....
John Ayers Alice Ames Henry Ball Carrie Comstock Henrietta Moon	Julia Adams Mary Hollister Sarah Smith Mary Whelan	

As the work in each session room is finished all teachers' lists are brought to the office. On Friday, which is clearing-up day for all sorts of things, the heads of departments sort and hand each teacher her lists; the session-room teachers see that the daily schedule on each class certificate is an exact copy of that on the "Plan of Work"; all reports of every kind are checked over, and in fact each teacher does everything that should be done to finish up the term's work before starting a new one.

On the following Monday, the first day of the new semester, we come together ready to start all classes, each with its proper assignment of pupils. Every pupil is given his "Class Certificate" by his session-room teacher at the very beginning of the day, the session-room teacher retaining the "Plan of Work," which becomes a tentative program for that pupil.

The classroom teacher refuses to accept a pupil who comes to her class unless his certificate and her list agree. No more classes of forty-five for Miss King and at the same hour only seven for Miss Allen are found. The prospect of changes in the personnel of the class is so slight that lesson assignments may safely be made on the first day and a prepared recitation expected on the second day of the semester.

Out of the one thousand three hundred students there may be from seventy-five to one hundred whose plans need some adjusting. Necessarily there are more of these changes to be made after the long summer vacation than at the mid-year. This is because pupils often present credit for work done during the summer. For example, John Ayers, marked to repeat Mathematics 4, may

Digitized by Google

have obtained permission to tutor in that subject and succeeded in obtaining from his tutor the recommendation to try Mathematics 5.

It is quite possible that the plan as outlined may seem cumbersome to those unfamiliar with its execution, and it may perhaps strike the uninitiated that it calls for an immense amount of work and that a great deal of time must be consumed in the making of the schedules for the students. To the first objection the answer can be made that it is found to be perfectly simple in its execution from beginning to end. As to the amount of work required, it is impossible to deny that in its execution there is a great deal of work on the part of each one of the faculty; but it is work for which each one receives a return, as it is much less nerve-racking and wearisome than our former method. As to the time required for making students' schedules, the first time a body of teachers attempts this the time required will probably be two days. So well does the plan work with our faculty that almost without exception the schedules for our entire school of over thirteen hundred students are made out in about four hours—and not one teacher in our school would go back to anything approaching the old method of program-making.

Digitized by Google

EDUCATIONAL NEWS AND EDITORIAL COMMENT

Chicago Schools

A wise American of the last generation strongly insisted that we must not judge democracy by its failures. Certainly no one would be foolish enough to estimate the value of democratic government by the recent experiences of Cuba, of China, or of Russia. Even in America we are compelled to believe in democracy, not because of spoils politics and pork-barrel legislation, but in spite of such failures. In Illinois we still support popular rule, in spite of recent tragedies and bloodshed in East St. Louis; and in Chicago we still believe in public franchise, in spite of an incompetent city administration saddled upon us for two years more; we still believe in popular control of education, in spite of the fact that our schools are constantly the playthings of politics, of religious prejudices, of personal whims and ambitions.

In June the *School Review*, speaking of changes about to be made in Chicago school control, predicted that there was to be a new board made up of strong, independent citizens who would set aside old controversies and would organize a school system second to none in perfection of organization and in breadth and quality of instruction.

The *Review* added that this statement was merely a prophecy—it was the substance of things hoped for; we therefore at present have no more serious error to account for than a mistake in prophecy or of what might have been. In June the mayor of Chicago, or whoever makes up his slate, nominated a new school board. Very few, if any, of the appointees were ever heard of before; they may or may not be people of ability. Then followed a nauseating spectacle of criminations and recriminations, with two boards, a new and an old, trying to secure recognition. Charges and countercharges in the city council flew thick and fast, including threats of impeachment proceedings against Mayor Thompson. Finally, in July, the Thompson (or someone's) appointees won out. A court decided the new board was legally constituted. However, they are at present (July 31) being subject to a new attack. A master in chancery is hearing a case brought by a taxpayer to withhold from officials of the new board payment of city funds,

Digitized by Google

on the ground of the general incompetence of newly appointed members. Apparently his case is not hopeless.

If, then, it were not for the dictum not to judge by failures the outlook would be gloomy. The one ray of comfort is that the thousands of teachers and scores of thousands of children go on as best they can under fairly competent instructional conditions. The vast depths of the system are placid. The storms are all near the surface, blown up by great winds that start from nowhere and arrive nowhere.

Composition in Correlation with Other Subjects

It is the fashion today to urge that English composition as at present conducted is largely wasted time. Educational leaders affirm that pupils need to be transferred from the artificial situations prevalent in composition classes into what may be called "real writing and speaking situations." And they tell us that these real situations are to be found in courses of history, civics, geography, and the like, which furnish abundant opportunity for both oral and written communication. Upon these premises program-makers are advised to reduce formal composition to one or two fundamental courses and to make every oral and written communication in all classes a real composition exercise. This apparently sensible position may be accepted, if definite provisions are made for vigorous and positive instruction in language habits through the medium of topical recitations and written exercises in content subjects. No haphazard incidental instruction will suffice.

Primarily, there must be kept in mind the fact that interest in content and in form are entirely different types of interest. Any capable writer knows that his expressional powers reach a maximum of efficiency only when his attention is thoroughly centered upon the subject-matter of his discourse. True, he has more or less deliberately made a prevision of the various logical steps by which he proposes to proceed to his goal. But when once he is in the fervor of writing, he cares little for mechanics like spelling, punctuation, grammatical agreement, or even fine rhetorical distinctions. For these details he has no more thought than he has for the legibility of his handwriting. Indeed, if any detail obtrudes itself, he impatiently pushes it aside, satisfied for the time being with crosses for punctuation marks, with single letters for words, or with dots or dashes for the exact expression that does not spring readily to his pen. The result may be a queer page of scratches and even blotches decipherable only by the writer himself. For the time being his total message,

Digitized by Google

with a reasonable comprehension of its various sub-ideas, engages, and ought to engage, a writer's undivided attention.

But the practiced writer is content temporarily to ignore mere mechanics only because he has the comfortable feeling that his rough draft is to be subject to one or more thorough overhaulings. He is willing to rely upon instinct and language habits to do their work in a fairly competent way, knowing that at the proper time and place he will have abundant opportunity to refine and polish. Before him in strict review will pass each successive sentence; dots, dashes, and abbreviations, a conglomerate individual shorthand, will be interpreted and completed. One sentence will be vigorously jerked from its context; another turned upside down; technical words looked up in the dictionary, often by a stenographer. In short, a writer pays to his composition an attention analogous to that he pays to his person before a dinner party or to his golf stroke when practicing with his caddy. He puts his thought, much as he does his person or his golf stroke, into form presentable for good society.

Content interest is primary, form interest is secondary. A worthy composition in poor form is no worse than a badly dressed man whose brain and heart are solid gold. A string of insipid ideas in good form is no better than a shallow-brained nincompoop dressed in the latest fashion.

Just in this distinction between content interest and form interest lies the great difficulty of teaching composition in connection with content subjects. Grant that teachers of content subjects themselves use good language habits (an assumption decidedly questionable), the doubt arises as to their willingness to insist upon, and their ability to give wise instruction in, the form aspects of composition. It is all very well for a principal to instruct all his teachers to guard against bad English in their classes. Much good may perhaps result. At the same time he must see to it that patient, timely, vigorous, and unremitting energy be spent by the teachers, quite apart from their attention to content questions, upon the grammatical and rhetorical principles of effective expression. Let a far-seeing principal decree that every bit of written work in his school shall be proofread by the writer, not once, but twice or more. This proofreading habit is about all that even a competent teacher of geography or history can find time to supervise. Instruction in language habits, in and of itself, must remain in the hands of the English department. By way of sensible co-operation, let English teachers use as laboratory material the proofread essays written by pupils in content courses.

Digitized by Google

Education as Usual

Dr. John H. Finley has just returned from Europe with the message that war-stricken France is doing everything in her power to keep her educational system running. Near the battle line she is even opening schools in caves and providing both teachers and children with gas masks. Dr. Finley uses the example of France to urge that America must not let the needs of the hour, however heavily they may fall upon the men and women of today, affect the defenses of tomorrow. Universities, colleges, and schools must continue as usual.

The colleges will be the hardest hit. One college president reports that 75 per cent of his students have entered some branch of the service. A high federal official calls the outlook ghastly. England's experience proves how futile it is to allow the preparation of well-trained men to languish. After the flower of her youth from college and university and engineering school had enlisted and most of them had been killed or disabled, England, with her educational institutions empty, learned that the war is one of factories, of machinery, of chemical problems, for which trained men are needed. Canada's colleges too were drained. Of course these men must go—brains, personal force, and leadership are needed in the trenches. But there ought to be spread abroad a most urgent call for youths not yet twenty-one to fill the vacant places in the higher institutions. Should the war drag on until millions of our troops are involved, the loss in our professional ranks of the next generation will be great. Thus, both as a patriotic duty and as an unrivaled personal opportunity, there rings out this year the call of the higher institutions for men. Commissioner Claxton has started the slogan, "No lowering of efficiency in our schools." This is good; but upon the 150,000 college men, future scientists, and trained experts the inroads of enlistment will be very heavy. Now, if ever, high-school influences ought to turn young men in the direction of higher education.

A Loose-Leaf Record Book

Superintendent R. E. Cavanaugh, of Salem, Indiana, reports the use of a loose-leaf record book which accomplishes several very desirable results. By its use the administrative officers are able to keep in close touch with the work of each teacher. The records are readily preserved in permanent files. Incidentally the records of each pupil in the various departments are collected and placed on file in the principal's office. The plan, moreover, provides opportunity for each teacher to supplement

Digitized by Google

his numerical estimate of a pupil's work with a brief statement of a pupil's effort, deportment, and achievement month by month.

Important Innovation in Part-Time Education

A further step toward the practical correlation of education with industry is to be seen in the action just taken by a number of Akron rubber factories in establishing at the Municipal University of Akron thirty scholarships in the engineering college under the following unique conditions: The candidates will be chosen from high-school graduates ranking in the upper third of the class, preference being given to graduates of Akron high schools, although others will also be received. The scholarships will cover all tuition, incidental, and laboratory fees. Upon entrance the scholarship-holders will be assigned to a course upon the co-operative basis, working alternate two-week periods in factory and college. In the factory they will become a part of the regular factory training squadron, proceeding step by step through every department of the industrial organization. In the college they will receive training in basic engineering and business-training subjects, this work being related to their practical experience by a regular system of co-ordination. Each student will receive from the company employing him the sum of $37.50 for each two-week period during which he is employed. At the end of the four-year course the graduate will have the opportunity of a permanent position in the organization in which he has been trained. Among the co-operating firms are the Firestone Tire and Rubber Company and the Goodyear Tire and Rubber Company, both of which have recently established industrial graduate fellowships in rubber chemistry at the Municipal University.

The plan just outlined is a decided innovation in the development of the part-time system, in that it offers the opportunity for a high-school graduate to procure an education practically without expense to himself—a condition now scarcely to be found outside such institutions as West Point and Annapolis. The co-operating firms are acting on the same sound economic basis on which the government itself proceeds, namely, that money spent in training men for its own service is well invested.

Big Things in the Small High School

To many a teacher who has served her apprenticeship in the small high school or who is even now wrestling with its problems this ques-

Digitized by Google

tion presents itself, "To just what degree can the average high school in a small town copy the activities of its city model and still retain its own efficiency?" In the small school the faculty is usually composed of teachers of meager experience, if much enthusiasm. They carry many subjects and are sufficiently burdened with classroom problems. Before the work of the year is hardly well under way, however, a whole army of extra-curriculum claimants for time and strength lay siege to the school.

Mary Jones, perhaps, has visited her cousin in a larger town where there is a high-school bird club. Mary is a real science enthusiast. Her school must have a club too. She gains the principal's doubtful consent, enlists twenty members and secures Miss A's Saturday mornings for bird walks. Then Miss B is persuaded to organize a modern-language club, which meets Friday afternoon. A few faithful spirits attempt to attend both clubs, but the earlier organization suffers a distinct loss of prestige. By this combination of circumstances two teachers are burdened with an organization in addition to their six classes a day. The turn of the rest will come!

Meanwhile an interest in track work draws together another section of the school, only to give place to basket-ball enthusiasm. As the only man on the faculty, the principal himself has to put in his valuable time as athletic director, although his administrative work plus four classes a day is enough for one man.

Musical talent is not to be neglected; the school must have a glee club and give a cantata; the Senior play has become an institution, and the Sophomores want one too; what does a school amount to without a debating contest? Through all this turmoil the school paper travels along its beneficent but time-consuming way. Thus the little school is teeming with activities, all excellent in themselves. Its students enjoy the full benefits of a well-rounded education. But is there not another side to the question?

The same small group of growing young people is called upon to give attention and strength to manifold phases of extra-curriculum life until there seems to be little time left for their studies. Sarah Smith is a girl of great ability and much school spirit, one who feels it her duty to help in all things. Her mother begins to complain that Sarah has something to do at school every night and can never take care of the baby. Will James is an athlete and sings; naturally he is popular socially. His father says he is too busy to study, but he never forgives the principal when Will, because of low scholarship, loses his place on the baseball team. Mary Green carries five studies and won't neglect

Digitized by Google

her lessons; consequently, when debates and other activities fill her days, her late hours result in making Mary a "giggler" at school and a "crank" at home. Her doctor-sister has reason to be agitated over the state of the girl's nerves!

What must be said of the teachers? They have the interests of the school at heart, they believe in all these good things, but they watch with growing apprehension the lowering of vitality and application on the part of their pupils. As far as they themselves are concerned, they are doing their best, but with them, as well as with the children, too many extra-classroom responsibilities are undoubtedly drawing unduly on their reserves of strength and affecting the quality of their work.

To what extent, then, shall we have the big things in the small high school? Here is the problem. Who can offer the satisfactory solution? What is the "golden mean"?

B. E. H.

Jud, North Dakota, Community Picture Show

There are two fundamental principles underlying every successful community co-operative enterprise. First, there must be a definite end in view; secondly, there must be a mutual interest in the project. To say that Jud or any other community has a full possession of these principles would be but idle words, for all communities are somewhat alike. But be that as it may, the essential thing is that we have a community moving-picture show. It is strictly co-operative and all profits go back to the community as a whole in the shape of better films and slides. And, like most undertakings of this type, it has passed through every stage of success from little interest with empty seats to high interest and a full house.

Jud, however, is peculiarly fortunate in possessing a school board which feels, and declares, that the school buildings should be used by the adults of the district as well as the children. This enterprise is but one phase of their attempts to bring the school and the people together. Last fall they noticed that the assembly hall—ours is the country-theater type—was used but a few times during the year, mainly for political purposes. They then set about to find some means of bringing it into use more frequently and hit upon the happy expedient of a co-operative picture show that would bring the people together at least once a week.

Naturally there were a number of problems to be solved before their aims could be realized. Money had to be raised to buy the equip-

Digitized by Google

ment and films suitable to be shown in a school hall had to be found. Other problems, such as the organization, admission fee, and personnel of the management, had to be definitely settled.

Finally, the township—for ours is a township consolidated school—paid for the electrical plant; the patrons of the school held a box social to help pay for the motion-picture machine; the balance was made up by private subscription, to be later repaid from the profits of the show.

In the search for films it was found that there were several firms who were making a specialty of renting films and slides to schools and churches. The best dramas, clean comedies, and purely educational films were available. The state and federal governments, the Agricultural College, and a number of manufacturing firms had films that could be obtained by paying the transportation charges.

The "movies" are held every Saturday evening. The local band usually plays for the show. Thus there are two strong forces pulling the patrons toward the school buildings at least once a week, and they usually come—several times through blizzards, when the thermometer was far below zero. The program is sometimes varied by flag drills or other exercises by one of the grades.

The profits, however, have never been large—rarely over three dollars—for the surrounding territory is still thinly settled, but the interest taken has been encouraging and points toward a better and closer community spirit in the future.

The machine is also almost an essential in class work, and it is planned to use it more extensively in the future in illustrating various school topics. It may be, and has been, used for special programs, such as "Baby Week." Needed school equipment, paintings, and other improvements are easily obtained when a picture show or two may be given to raise the money, for, while the patrons are paying for the desired improvement, they are also being entertained and instructed.

L. C. C.

Digitized by Google

CURRENT EDUCATIONAL WRITINGS

I. REVIEW OF RECENT LITERATURE ON SECONDARY-SCHOOL MATHEMATICS

E. R. BRESLICH
The University High School

The discussion of writings on mathematics has been limited to textbooks and articles dealing with some phase of secondary mathematics, including reports of committees. For the purpose of convenience these articles have been classified as follows:

1. Discussions of the values of mathematics as a high-school subject. Among teachers of mathematics this topic probably has aroused more interest during the past year than any other.

2. Suggestions for improving methods, arrangement of material, requirements for graduation, interest on the part of the pupil, and means for developing greater skill in the mathematical processes.

The reviews which follow are arranged in this order:

THE EDUCATIONAL VALUE OF HIGH-SCHOOL MATHEMATICS

1. "Teaching of Elementary Mathematics." By Louis C. Karpinsky. *School and Society*, January 20, 1917.

Efficiency, says the writer, is the watchword of modern business. The details involved in manufacture are examined critically. Public education should be subjected to the same critical scrutiny.

Critical examination of the study of mathematics is being made and progress along the following lines:

a) Correlation is worked out between several branches of mathematics and between mathematics and life.

b) The historical development of mathematics is receiving more attention.

c) The details of the teaching of mathematics are being studied.

d) The trigonometrical relations receive recognition in plane geometry.

e) The number of problems and illustrations in applied design, and of other practical applications, is increasing.

f) The study of *formal* geometry is preceded by an introductory course.

g) Graphs are introduced in algebra.

Digitized by Google

2. "Report of the Committee of the New England Association of Teachers of Mathematics on Secondary School Mathematics." *Mathematics Teacher*, April, 1916.

This report gives a study of the present status of secondary-school mathematics and a discussion of the fundamental issues. Some of the educational values of mathematics are considered in detail and a comparison is made of the curricula of American schools with the schools of European countries.

The committee reaches some important conclusions and makes recommendations regarding high-school requirements in mathematics, college-entrance requirements, the curriculum, and the preparation of teachers.

3. "The Place of Mathematics in the High School." By Raleigh Schorling, F. A. Kahler, and O. M. Miller. *School Science and Mathematics*, October, 1916.

This is a report of the committee appointed by a club of teachers of mathematics in the city of Chicago to investigate the current criticisms of high-school mathematics.

The committee gives a long and thorough discussion of the values of high-school mathematics. It also suggests the type of mathematics that should be required in the future high school.

4. "The Value of Mathematics as a Secondary-School Subject." By Harriet R. Pierce. *School Science and Mathematics*, December, 1916.

Miss Pierce argues that mathematics is an excellent subject for forming habits of study, such as neatness, accuracy, and concentration.

5. "Required Mathematics." By A. R. Crathorne. *School and Society*, 1917.

The criticisms of high-school mathematics are considered, and comment is made upon the signs of interest among teachers of mathematics. It is shown that the more constructive criticisms are resulting in such forward movements as correlation and the laboratory method.

The problem of formal discipline also receives some consideration. In the usefulness of mathematics we find arguments for both the formal and the useful side of algebra.

6. "Reasons for Studying Algebra." By George W. Myers and George E. Atwood. *Elementary Algebra*. Scott, Foresman & Co.

This excellent statement of the case of algebra should be read by every teacher interested in secondary education.

7. "The Bearing of the New Psychology upon the Teaching of Mathematics." By Agnes L. Rogers. *Teachers College Record*, September, 1916.

This article gives a review of experimental investigations in algebra and geometry. It discusses the amount of correlation between efficiency in mathematics and efficiency in other subjects and reviews the established results regarding transfer of training.

Miss Rogers draws the following conclusions to bring about improvement in the teaching of mathematics:

Digitized by Google

a) A proper attitude is to be cultivated in the pupil.

b) More attention is to be focused on the art of learning and the methods of procedure in solving problems.

c) Attention is to be directed to related ideas in order that as many as possible be recalled.

d) Motivation should be secured and attention should be kept at a high level.

8. "School Mathematics and War." By G. A. Miller. *School and Society*, October 21, 1916.

The purpose of the article is to show the usefulness of mathematics to the soldier.

9. *Problems of Secondary Education.* By David Snedden. Houghton Mifflin Co.

Mr. Snedden's views and criticisms are widely known and have aroused a great deal of discussion, partly because they are of the constructive type. Every teacher of high-school mathematics should be familiar with the chapter in this book which deals with mathematics.

IMPROVEMENT OF METHODS

1. "Supervised-Study Plan." By Carl H. Nielson. *School Review*, March, 1917.

The principal features of the plan are, first, special conferences of pupils who have fallen behind with the instructor; secondly, teaching of the group as a whole how to study.

2. "Teaching Pupils to Study." By F. W. Johnson. *School Review*, November, 1916.

An appeal to teachers to make careful studies of the teaching process and to publish the methods used and the results.

3. "Supervised Study in the Everett High School." By Alexander C. Roberts. *School Review*, December, 1916.

4. "Results of Supervised Study in the Houghton, Michigan, High School." By John E. Erickson. *School Review*, December, 1916.

5. "Supervised Study." *School Review*, October, 1916.

This article gives a list of schools experimenting in supervised study.

6. "A University How to Study Class." By Herbert G. Lull. *School and Society*, December, 1916.

A plan is described which aims to develop the study habit of a class of college students taking a course in civil engineering. The article contains many points of value to the teacher of high-school mathematics.

7. "Supervised Study." By Thomas R. Cole. *School Review*, May, 1917.

8. "Supervised Study." By I. M. Allen. *School Review*, June, 1917.

9. *How to Study Effectively.* By G. M. Whipple. Public School Publishing Company, Bloomington, Indiana.

Digitized by Google

This little book gives valuable directions in teaching effective methods of study.

ARRANGEMENT OF THE CONTENT OF A COURSE IN HIGH-SCHOOL MATHEMATICS

1. "Unification of Mathematics in the High School." By W. D. Reeve. *School and Society*, August 5, 1916.

It is argued that unifying of high-school mathematics may help to settle many of the controversies that have arisen.

2. "Unification of Mathematics in the High School." By H. C. Wright. *School and Society*, October 7, 1916.

This article contains definite references to experiments in unification. The economy of the plan is emphasized. It is suggested that courses offered in schools of education give opportunity for better training of teachers.

3. "Report of the Committee on Geometry." By E. R. Breslich, Ernest B. Lytle, and Irwin M. Miller. *School and Society*, January 13, 1917.

An outline of a course in geometry beginning in the elementary school and continued through the high school.

4. "A Course of Study in Secondary Mathematics in the University High School." By E. R. Breslich, Raleigh Schorling, Horace C. Wright, and Harry N. Irwin. *School Review*, November, 1916.

An outline of the aims, values, and content of the course in mathematics given in the University High School.

5. "Administrative Aspects of the High School." By Franklin W. Johnson. *Education*, June, 1917.

Principal Johnson suggests that the requirement for formal algebra and geometry give place to a single year devoted to the study of the essential number and space relationships of algebra, geometry, and trigonometry, built upon a mastery of the essentials of arithmetic.

6. "The Content of a Mathematical Course for the Junior High School." By F. W. Gentleman. *The Mathematics Teacher*, June, 1917.

The writer advocates for the first year a review of the fundamental operations of arithmetic, some very simple algebra, and mensuration; for the second year, a review of arithmetic, formulas, percentage, geometric constructions, and simple equations in one or two unknowns; for the third year, a review of arithmetic, formulas, linear equations, factoring, quadratic equations, an introduction to a systematic study of the theorems of geometry.

7. "Possibilities of the Junior High School." By Thomas H. Briggs. *Education*, January, 1917.

It is proposed that mathematics, instead of being confined to the higher reaches of arithmetic, should concern the general applications of arithmetic and introduce the more practical elements of algebra, constructive geometry, and even trigonometry.

8. "Mathematics in the Junior High School." By David Eugene Smith. *Educational Review*, April, 1917.

Digitized by Google

This article recommends a systematic and topical arrangement of arithmetic, constructive geometry, formulas, elementary algebra, and formal algebra.

9. "College-Entrance Mathematics." By George V. Dearborn. *School and Society*, October, 1916.

The question of the usefulness of algebra is raised in connection with the discussion of the mathematical requirements of the College-Entrance Examination Board.

10. "Tests and Examinations." By H. T. Terry. *School and Society*, October 28, 1916.

Suggestions are made for the changes in the nature and methods of examinations.

MEANS OF DEVELOPING SKILL IN MATHEMATICS

1. "Standardized Tests and the Improvement of Teaching in First-Year Algebra." By H. O. Rugg and J. R. Clark. *School Review*, May, 1917.

The authors have worked out a number of standardized tests for the fundamental operations of first-year algebra. They hope that the efforts to establish standards will have considerable effect upon the teaching of algebra and that the standardized tests will serve as a device for the improvement of teaching this subject.

2. *Standardized Practice Exercises in First-Year Algebra.* By H. O. Rugg and J. R. Clark, Chicago, Illinois.

These tests will serve as a device for improving such fundamental processes of algebra as collecting terms, solution of simple equations, substitution, removal of parentheses, subtraction, manipulation of exponents, finding special products, factoring, solving quadratic equations, clearing of fractions, solving simultaneous equations, and simplifying radicals. The tests are so arranged that a student can easily grade his own or another student's paper.

3. *Geometry Tests.* By J. Minnick, University of Pennsylvania.

Mr. Minnick has sent copies of his tests to a number of schools for trial. So far as the writer knows, he has not published his results.

MEANS OF AROUSING GREATER INTEREST IN THE STUDY OF MATHEMATICS

In *School Science and Mathematics* we find a number of brief articles dealing with this question. Many of these articles contain simple reading matter which a high-school pupil may study with profit. They make excellent material for reports to a class or to a mathematics club. Such use of these articles is to be recommended.

1. "A Mathematical Victory, A Play in Two Acts." By The Mathematics Club of the Los Angeles State Normal School of California. *School Science and Mathematics*, June, 1917.

2. "History and Use of Mathematical Textbooks." By G. A. Miller. *School and Society*, December 16, 1916.

Digitized by Google

Students are advised to broaden their mathematical notions by reading articles relating to the subject. Historical notes are said to intensify the pupils' interest.

3. "A Mathematical Contest." By Edgar T. Boughes. *School Science and Mathematics*, April, 1917.

This contest was arranged between pupils of the Manual Arts High School of Los Angeles and the Pasadena High School.

4. "Mathematics Contests." By Ernest H. Koch. *Mathematics Teacher*, June, 1917.

5. "Mathematics Clubs." By Louise Webster. *Mathematics Teacher*, June, 1917.

6. "The Half-Angle Formula Derived by Line Values." By G. W. Armstrong. *School Science and Mathematics*, April, 1917.

7. "The Use of the Radical Symbol." By G. A. Miller. *The Mathematics Teacher*, March, 1917.

NEW TEXTBOOKS

1. First Course in Algebra. By Herbert E. Hawkes, William A. Luby, and Frank C. Touton. Ginn & Co. Pp. ix+301.

A revision of the *First Course in Algebra*. It differs from the older edition in omitting such topics as "Highest Common Factor" and "Least Common Multiple." It also contains many new problems and exercises. New ideas and operations are usually introduced with sets of oral exercises. It is aimed to present the subject with greater simplicity than the older text.

2. *Elementary Algebra*. By Elmer Lyman and Albertus Darnell. American Book Company. Pp. vii+503.

The authors aim to secure simplicity by omitting unduly puzzling exercises and non-essentials, at the same time satisfying the requirements of the College-Entrance Examination Board. The book contains considerable correlation with arithmetic.

3. *Elementary Algebra*. By George William Myers and George E. Atwood. Scott, Foresman & Co. Pp. 338.

A clear and simplified treatment of a first-year course in algebra. A book which the pupil should be able to read and understand. The practical value of algebra is emphasized. An important feature of the book are the frequent reviews and numerous practice exercises.

4. *Complete Algebra*. By H. E. Slaught and N. J. Lennes. Allyn & Bacon. In two parts. Pp. x+373 and pp. v+256, respectively.

The authors follow the traditional course in algebra, aiming to present the subject in a simple manner. The book contains a large number of illustrative examples, review exercises, and lists of problems taken from college-entrance examinations. Historical notes and portraits of mathematicians add to the interest of the student.

5. *Plane Geometry*. By Durell and Arnold. Charles E. Merrill Co. Pp. 300.

Digitized by Google

An improvement in the methods of teaching pupils to solve original exercises. The number of propositions is reduced and corresponds closely to the Harvard *Syllabus* and to the report of the Committee of Fifteen. The theory of limits and incommensurable cases are omitted.

6. *Plane and Solid Geometry*. By John C. Stone and James F. Millis. Benjamin Sanborn & Co. Pp. x+448.

A revision of the older plane and solid geometry. The principal aims of the book are simplicity of presentation and emphasis upon practical problems.

7. *Plane and Solid Geometry*. By William Betz and Harrison E. Webb. Ginn & Co. Pp. xi+507.

An exceedingly attractive book, which should be found on every teacher's desk.

8. *First-Year Mathematics*. By George W. Evans and J. A. Marsh. Charles E. Merrill Co. Pp. 253.

As the title indicates the course contains more than algebra, including a considerable amount of geometry. Many concrete problems may be found in the book.

9. *Introduction to Mathematics*. By Robert L. Short and William H. Elson. D. C. Heath & Co. Pp. viii+210.

A correlation of arithmetic, algebra, and straight-line geometry. The book contains a large number of applied problems.

10. *Second-Year Mathematics*. By E. R. Breslich. The University of Chicago Press. Pp. xx+348.

This is the second of the series of textbooks on secondary mathematics designed as a second unit of a year's work and following the first course worked out by the author in *First-Year Mathematics*. It completes the study of plane geometry, continues the study of algebra and solid geometry, and begins trigonometry.

11. *Plane Geometry*. Edith Long and W. C. Brenke. Century Co. Pp. vii+276.

The practical side of geometry is emphasized. The introduction of the trigonometric functions in the chapter on ratio and proportion and of numerous geometric exercises to be solved algebraically is a step in the direction of correlated mathematics.

II. BOOKNOTES AND REVIEWS

TRYON, R. M. *Household Manufactures in the United States, 1640 to 1830:* A Study in Industrial History. Chicago: The University of Chicago Press. Pp. 412. $2.00.

Professor Tryon affirms that a history of any special phase of the life of a people, to be of value, should not be treated in isolation from the various other phases of that people's life. In presenting *Household Manufactures in the*

Digitized by Google

United States, 1640 to 1830, the author has indicated clearly the relation of household manufactures to the social, political, and general industrial life of the people.

The book consists of eight chapters. The introduction discusses the scope, importance of the subject, and the connection with present-day problems. In chap. ii the factors affecting household manufactures in the colonies show how England's colonial policy was answered by the colonists when they turned to manufacturing in the home. Chapter iii indicates the status of manufactures in the colonies, and chap. iv is devoted to a quarter-century of developments in which the dominant factor in the struggle for industrial independence from 1784 to 1809 is manufacturing in the homes. A year's output of the family factory and the products of the family factory are treated in chaps. v and vi. The transition from family to shop and the passing of the family factory conclude the discussion in the last two chapters.

The author has used extensively the census returns, reports of the treasury department, and the records of many state and local historical societies in the choice and selection of his material. A splendid feature of the book is nineteen tables, copious footnotes, and a workable bibliography.

The book is a valuable contribution as a text in secondary and normal schools and in colleges where courses in industrial history, home economics, and household arts are given. Its reliable information recommends it to all teachers and students of American history.

The variety of topics that Professor Tryon discusses being considered, it seems extraordinary that he has been able to confine his treatment to one volume. This he has done because of the method of his treatment, which has been both topical and chronological. The book answers a long-felt need in the field of industrial history and merits the thoughtful consideration of all school authorities and teachers of history.

ROBERT E. JORDAN

DEPARTMENT OF HISTORY
CHICAGO LATIN SCHOOL FOR BOYS
CHICAGO

WOOD, CLARENCE A. *School and College Credit for Outside Bible Study.* World Book Co., 1917. $1.50.

A custom that has gained widespread recognition in the past few years is that of giving school credit for outside work. Among the many studies commonly pursued outside of the public school is the study of the Bible. Those interested in this special phase of the general movement will find much of value and interest in Mr. Wood's consideration of the topic, in which is a body of material of great practical value. Besides a summary of the present status of the movement to grant college, high- and elementary-school credit for outside Bible study, the book contains plans and suggestions for the future of such work as well as a number of syllabi in actual use.

Digitized by Google

Since the author discusses the plan of giving credit for outside Bible study as it is now applied in higher, secondary, and elementary education, his book should be of interest to a rather large audience. In discussing the adaptation of the plan, the country is considered in sections, such as the central, the western, the Atlantic, and the southern states. In these groups individual states are usually treated separately, thus giving the reader an opportunity to view the situation in the concrete.

The Gary, Indiana, the Greeley, Colorado, the Austin, Texas, and the North Dakota plans are presented in considerable detail. The appendix contains the following syllabi: North Dakota, Colorado, Oregon, and Virginia. Thus it will be seen that to the one desiring a knowledge of the present status of the movement to give credit for outside Bible study and suggestions for inaugurating or improving such work the book will be of great value. It certainly contains an excellent résumé of the best that is now done in this important field.

SCOTT, J. F. *Patriots in the Making.* New York: D. Appleton & Co., 1916.

Professor Scott has written a valuable book both for the student of the history of modern European education and the teacher of American history. The subtitle of his book is *What America Can Learn from France and Germany,* which is more suggestive of what the book really contains than the main title, as the following list of chapter headings shows: "French Education as National Self-Expression," "Molding the Psychology of Defense," "The Inculcation of Hostility toward Germany," "The Teaching of Loyalty to the Republic," "Concluding Forces in French Education," "Patriotism in German Education," "The Lesson for America," and "Military Training in Europe."

To the student of the history of modern European education who desires to see how the educational systems of France and Germany have contributed to the inculcation of the spirit of patriotism in the growing youths of these nations, the first six chapters of this book will be of great value. This fact should be especially emphasized, since from its title one would not suspect the book contained so much in the field of the history of education. The chapter on "The Lesson for America" contains much of value to the teacher of American history. While one might not agree with all of the author's proposals relative to the teaching of patriotism, yet the chapter contains many suggestions of value. For example, the criticism of our texts in American history because of their tendency to overglorify certain events in our history is certainly justified. There is also need of having the attention of history teachers called to the fact that these same texts tend to create a spirit of hatred for England. This is done very effectively by the author. The book will doubtless be read with interest by the lay reader, since the style is free and easy and the organization clear and compact.

Digitized by Google

KIRKPATRICK, M. G. *The Rural School from Within.* Philadelphia: J. B. Lippincott Co., 1917.

This adds another to the rapidly growing list of books that deal with the rural school from one angle or another. Its title is unique and suggestive, and its chapter headings include "Living up to Reputation," "Onward Christian Soldiers," "In Loco Parentis," "Bossing One's Employer," "Managing Girls," etc.

There is nothing vitally new in the book except the style of presentation, which is autobiographical. The fundamental propositions which it presents are thus embodied in a form that should secure an audience from young people who are preparing for teaching, particularly in rural schools. It recounts incidents and describes customs and practices formerly common in rural communities. It makes these the medium through which to present modes of treatment of boys and girls of school age. To the young rural teacher it suggests ways of getting a better rural community interest. The "suggested improvements" include nothing new, but serve to impress these things on the beginning teacher.

On the whole the spirit and tone of the book is sane and helpful and will help to inspire those who sincerely desire to render service to country people.

GEORGE L. ROBERTS

PURDUE UNIVERSITY

RICHARDSON, ROBERT P., AND LANDIS, EDWARD H. *Fundamental Conceptions of Modern Mathematics. Variables and Quantities with a Discussion of the General Functional Relation.* Chicago and London: Open Court Publishing Co., 1916. Pp. xxi+216.

The book before us is one of a projected series of thirteen upon the general subject of fundamental conceptions of mathematics and bears the subtitle *Variables and Quantities.* It consists of a preface in which the authors express both their contempt and their pity for the weaknesses of mathematics and for certain schools of philosophers; one chapter of 169 pages on "Variables and Quantities"; and one chapter of 29 pages on "The General Conception of the Functional Relation."

To the mathematician seeking a constructive criticism of his own science from the standpoint of philosophy, and to the philosopher seeking a rational account of the "science of self-evident things" in terms of the broader concepts of philosophy, the book will prove a disappointment. The authors profess to find the keynote of their work in "the distinction we find it necessary to make between quantities, values, and variables on the one hand, and between symbols and the quantities they represent on the other." They especially deplore the confusion they seem to find between symbols and the quantities they represent and the alleged tendency on the part of certain mathematicians to make mathematics entirely a matter of symbolism.

Digitized by Google

Apparently the authors would make vectors and relations the entities which lie behind the algebraic symbols, though this is by no means clear. From the standpoint of the mathematician such a view is wholly untenable. They speak, for example, of the *geometric* representation of an ordinary complex number. It is wholly immaterial whether this representation consists of a broken line drawn from the "origin," to a point, or of a directed straight line drawn from the origin to the same point, or of the point itself. It is the pair of numbers which enables him to locate the point that interests him. For many purposes it is better to represent complex numbers upon the surface of a sphere rather than upon the so-called Argand plane, or upon a "Riemann surface" which has no particular shape and may be deformed at will, subject to certain definite restrictions. The ordinary Argand representation of complex numbers rests essentially upon a co-ordinate system. Co-ordinate systems, important as they are, are mere scaffolds by means of which the building itself is to be erected. It is not the relation of a curve to a particular co-ordinate system that interests us most, but the properties of the curve that are independent of all co-ordinate systems. Euler and Demoivre gave us an almost complete theory of ordinary complex numbers nearly a hundred years before the geometric representation was discovered by Argand and Gauss. Moreover, geometric representation is impossible for complex numbers with more than three independent units.

In various places (pp. 31, 40, 41) they speak of quaternions as "applicate" or denominate quantities; but on p. 46 they say: "It is by no means superfluous for us to insist that a quarternion is nothing more or less than an abstract quantity." They take issue with Hamilton and Cayley in their assertions that i, j, and k of Hamilton's quaternion theory are wholly distinct from the i or ordinary complex numbers, but on p. 135 they give explicit formulas showing that the "old and ordinary imaginary symbol of common algebra," as Hamilton termed it, satisfies the commutative law for multiplication when combined with the i, j, and k, which is not true of these numbers themselves.

Rejecting Hamilton's definition of a quaternion as the quotient of two vectors, the authors define it as a "relation," saying that they do not "regard a ratio or a quotient as a relation." "Though it is true that each relational quantity may on occasion be a ratio or a quotient, it need not necessarily be so; a relational quantity may exist for millions and millions of years and never be chosen for such a rôle."

In a book which has for its avowed purpose the criticism of current definitions relating to variables and functions, the reader has a reasonable right to expect that some attempt at a constructive definition of a variable shall be made. Instead, we read on p. 155: "Any attempt to give a precise definition of the term variable would require a somewhat lengthy consideration of the philosophical theory of categories, which cannot be given in this place." Following this declaration is a brief statement of the relation existing between

Digitized by Google

the various schools of philosophy, in the course of which we are told that the authors uphold the more extreme form of expiricism, which they denote "provisionally" by the title nominalism. For the mathematician who believes that any attempt to interpret mathematics in the light of a particular philosophical doctrine is probably foredoomed to failure, this fact might easily be made to account for some, though by no means all, of the vagaries of the book.

Both from the standpoint of mathematics and of philosophy the publication of such a book is distinctly unfortunate, and it is sincerely to be hoped that the publishers may take the necessary steps adequately to inform themselves concerning the character of any future volumes of the projected series that may be offered before giving them to the public.

Koos, L. V. *The Administration of Secondary-School Units.* Chicago: The University of Chicago Press, 1917. Pp. 294. $1.00.

In this monograph of 194 pages Dr. Koos "presents, largely from the view of the Educational Administration, the results of an investigation into the status of the teaching of almost all subjects appearing in the secondary-school program of study." The data for the study were collected for the use of the Committee on Reorganization of the Secondary School and the Definition of the Unit of the North Central Association of Colleges and Secondary Schools.

The subjects included in the report are Latin; Greek; German; French; Spanish; algebra; geometry; trigonometry; general science; physiography; botany; zoölogy; biology; chemistry; physics; agriculture; ancient, mediaeval and modern, English, and American history; civics; economics; manual training; home economics and household art; commercial subjects; art; music; and public speaking. These subjects are grouped and discussed under the following heads: "Foreign Languages," "Mathematics," "Science," "History and Other Social Studies," "The Vocational Subjects," "The Fine Arts," and "Public Speaking." Such topics as extent of the offering, methods, aims, and organization are discussed in their application to each of the foregoing subjects.

The questionnaire method was used in collecting the data for the study. It should be said, however, that Dr. Koos's precautions relative to the selection of individuals to make reports and the formulation of the questions saved the study from the usual pitfalls of a report of this type. It is not too much to say of the monograph that it is a model study based on material collected by the questionnaire method. It will certainly prove of great practical value to high-school teachers and administrators and to persons anticipating a similar study by the same method.

Digitized by Google

GEHRS, J. H. *Productive Agriculture.* Chicago: Macmillan, 1917. Pp. 436. $1.00.

The purpose of this book is to meet the need and the demand for a text that will standardize seventh- and eighth-grade agriculture. Little or no attention is given to such topics as origin, history, and the importance of farm crops and animals. Topics relating to *productive agriculture* and not topics *about* agriculture are given chief consideration. Such topics as how to produce larger yields, use of more prolific varieties, the use of high-grade or pure-bred stock, how to feed well and economically, how to combat enemies, and how to choose, plan, and manage a farm are the topics with which the work deals.

Specifically speaking, the book contains a section of from four to eight chapters in length on each of the following big topics: "Farm Crops," "Animal Husbandry," "Soils," "Horticulture," and "Farm Management." There is also a brief bibliography of material relating to each of these large topics. The laboratory exercises at the end of each chapter are very practical and can be done with a minimum amount of schoolroom equipment, the farm itself furnishing the requisite laboratory. Anyone interested in texts in agriculture adapted to grades seven and eight or to the junior high school will be well paid for the time and effort required to give this book a careful consideration.

ASHLEY, R. L. *The New Civics: A Textbook for Secondary Schools.* Chicago: Macmillan, 1917. Pp. 420. $1.25.

The contents of this book justify its name—*The New Civics.* Part I is devoted to the topic, "The Citizen and Society," and contains chapters on citizenship, the education of the citizen, the American nation, civic organization, and the American home and family. Part II deals with "Government and the Citizen" and is made up of a chapter on each of the following topics: suffrage and elections, other means of popular control, civil liberty and public welfare, public finance, city government, state and country government, the national constitution, and the national government. Six chapters on the general topic, "Some Public Activities," compose the third and last part of the book. Public health and welfare, labor and industry, commerce, other business activities, territories and public land, and foreign relations are the subjects considered in this part. The appendix, among other things, contains an outline of a course on civic problems. Since this is the outline of a course Mr. Ashley actually gives, it is of more value than a purely theoretical one.

From the standpoint of teaching aids the book has much to commend it. At the end of each chapter there is a list of general references on the material considered in the chapter, a series of topics for special consideration with exact references on each, a group of studies which contain material for brief daily reports, and, finally, a number of questions based, for the most part, on the text. Besides the foregoing aids the book contains some sixty-four

Digitized by Google

well-selected illustrations and eight maps and charts. Furthermore, each chapter is divided into a number of large divisions, each one of which is divided, the division in this case being indicated both by numbers and bold-face type. There is also an abundance of marginal notes as well as footnotes. On the whole the book is a decided improvement over the traditional text on civics.

POWELL, SOPHY H. *The Children's Library*. New York: The H. W. Wilson Co., 1917. $1.75.

There seems to be an urgent need at the present time for a closer relation and a more systematic co-operation between the public library and public education. While the two institutions grew up rather independently of each other, there has recently arisen the feeling that they are both working toward a common goal, namely, the education of the public. The book under review will do much to unify the work of the public school and the public library. Such topics as the following are discussed: the place of books in education, early libraries for children, the elementary- and high-school libraries, library resources of country children, public-library relations with public schools, the public library an integral part of public education, the children's room, the children's librarian and her training, aids to library work with children, book selection, and some social aspects of library work with children. An elaborate bibliography of the material relating to each of these topics is included. The book is certain to find an important place in all libraries as a general-reference book and as a text in library-training schools.

III. PUBLICATIONS RECEIVED

(Detailed discussions of some of the following books will appear later.)

ANDERSON, MABEL L. *A Study of Virgil's Description of Nature*. Boston: Richard G. Badger, 1916. Pp. 224. $1.25.

BAILEY, CAROLYN S. *For the Children's Hour*. Books II and III. Chicago: Milton Bradley Co., 1917. Pp. 116.

Contains supplementary reading material adapted to grades two, three, and four.

BENNETT, C. A. *The Manual Arts*. Peoria, Ill.: Manual Arts Press, 1917. Pp. 116. $1.00.

A brief discussion of the selection and organization of subject-matter and the methods of teaching manual arts. Several chapters have previously appeared in magazines.

CORCORAN, REV. T. *State Policy in Irish Education*. New York: Longmans, Green, & Co., 1916. Cloth. 8vo, pp. 235. $2.00.

Digitized by Google

CRESWELL, JOHN BAXTER. *Bible and Mission Stories.* Boston: Gorham Press, 1916. Cloth. 12mo, pp. 145. $1.00.

EVANS, LAWTON B. *Worth While Stories for Every Day.* Chicago: Milton Bradley Co., 1917. Pp. 424.

FALES, JANE. *Dressmaking.* New York: Scribner, 1917. Pp. 508.
A text for colleges and schools above the elementary.

FLETCHER, MABEL E. *Old Settler Stories.* Chicago: Macmillan, 1917. Pp. 193.
A book in the "Every Child's Series." Contains stories of pioneer life in the Middle West during the thirties and forties.

FORD, J. D. M., and HILLS, E. C. *First Spanish Course.* Chicago: D. C. Heath & Co., 1917. Pp. 327. $1.25.

FRANK, LUDWIG. *Essentials of Mechanical Drawing.* Chicago: Milton Bradley Co., 1917. Pp. 132.
A manual for students arranged for reference and study in connection with courses in manual-training, industrial high, and technical schools.

GATES, H. W. *Recreation and the Church.* Chicago: The University of Chicago Press, 1917. Cloth. Pp. xi+185. $1.00.

HAMLIN, G. S. *Human Nature.* New York: The Knickerbocker Press, 1917. Pp. 213.
A series of essays on the following subjects: "The Soul," "Death," "Approbation," "Art," "Education," "Necessity," "Understanding," and "Justice."

HANCOCK, JOHN L. *Studies in Stichomythia.* Chicago: The University of Chicago Press, 1917. Paper. Royal 8vo, pp. v+97. $0.75.

HERVEY, W. L., and HIX, MELVIN. *Introductory Third Reader* and *Introductory Fourth Reader.* New York: Longmans, Green, & Co., 1916 and 1917. Pp. 274 and 314. $0.50 and $0.56.

HOSIC, JAMES F., and HOOPER, CYRUS L. *A Child's Composition Book*, also *A Composition Grammar.* Chicago: Rand McNally & Co., 1916. Pp. 281 and 296. $0.50 and $0.60.

Indian Education in 1915-16. Government of India, Bureau of Education. Calcutta: Superintendent Government Printing, India, 1917.

KIRKPATRICK, M. G. *The Rural School from Within.* Philadelphia: J. B. Lippincott Co., 1917. Pp. 303.

KOOS, L. W. *The Administration of Secondary-School Units.* Chicago: The University of Chicago Press. 1917. Pp. 194. $1.00.

LARSON, W. E. *Wisconsin County Training Schools for Teachers in Rural Schools.* Department of the Interior, Bureau of Education, Bulletin No. 17, 1916.

Digitized by Google

LIEBNITZ, W. G. *New Essays concerning Understanding.* Trans. by A. G. Langley. (2d. ed.) Chicago: Open Court Publishing Co., 1916. Pp. 861+xiv.

LUTKENHAUS, ANNA M., and KNOX, MARGARET. *Story and Play Readers.* Vols. I, II, and III for grades six, seven, and eight. New York: Century Co., 1917. $0.60 a volume.

MORREY, C. B. *The Fundamentals of Bacteriology.* Philadelphia: Lea and Febiger, 1917. Pp. 289. $3.00.
A text intended to cover an introductory semester's work.

NELSON, RALPH W. *Hattie Elizabeth Lewis Memorial. Essays in Applied Christianity. How Christ Would Organize the World.* Published by the University of Kansas, 1917. Pp. 32.

ROBERTS, A. W., and ROLFE, J. C. *Cicero.* New York: Scribner, 1917.

ROBESON, F. E. *A Progressive Course of Precise Writing.* New York: Oxford University Press, 1917.
Aims to present the leading features of what is described in a number of original documents.

SMITH, A. *The New Barnes Problem Books for Grade Seven.* New York: A. S. Barnes Co., 1917. In two books. Pp. 61 and 70. $0.10 each.
The two books contain 140 carefully graded lessons of about ten problems each, grouped in a way to tell a story. Might serve as a teacher's "term plan."

TAYLOR, JOSEPH S. *Duplicate Schools in the Bronx.* New York: Published by the Board of Education, 1916.

THAMIN, R. *L'Université et la guerre.* Paris: Librairie Hatchette et Cie, 1916.

THWING, CHARLES F. *Education according to Some Modern Masters.* New York: Platt & Peck Co., 1916. Pp. 296. $2.00.
A literary discussion of educational sources.

VAN DEUSEN, C. *Demonstration in Woodwork.* Peoria, Ill.: Manual Arts Press. $1.15.
The book represents a plan to be followed by students who wish to learn the fundamentals of woodworking, but who have no opportunity to receive continuous instruction from one especially prepared to give it. The book is particularly valuable for rural schools.

Webster's Collegiate Dictionary. Springfield, Mass.: G. & C. Merriam Company, 1917. Pp. 1224.
Webster's Collegiate Dictionary, 3d ed., is the largest abridgment of *Webster's New International.* It contains most of the essentials of the larger work and was prepared under the same editorial supervision. The thin-paper edition de luxe is printed on Bible paper, which was especially made to combine the qualities of opacity

Digitized by Google

body, strength, and an excellent printing surface, with requisite thinness. The result is a convenient volume one-half the bulk of the edition on regular book paper. The book is complete enough for the average student and yet small enough to find a place upon the writing table or business desk.

WEEKS, A. D. *The Avoidance of Fires.* Chicago: D. C. Heath & Co., 1916. Pp. 128.

A textbook on fire prevention. Aims to create a mental attitude as well as to impart knowledge. Could be used in supplementary work in civics, arithmetic, elementary science, physics, or language.

WELLS, F. L. *Mental Adjustments.* New York: D. Appleton & Co., 1917. Pp. 331. $2.50.

WIER, M. C. (translator). *The Prometheus Bound of Aeschylus.* New York: Century Co., 1916. $0.65.

WILKINS, A., and LIMA, M. A. *Lecturas Faciles.* Boston: Silver, Burdett & Co., 1916. Pp. 256.

Lecturas Faciles is a practical reader and grammar with interesting illustrations. The selections are of popular character rather than of the literary type, as is usual in most readers. The volume provides everyday idiomatic Spanish stories that are simple, yet not childish, that can be readily appreciated by the beginner. The book is intended for use in the second and third semesters in high school, or in the first and second semesters of college. Part I is based chiefly upon the *Libro Segundo de Lectura* and *Libro Tercero de Lectura* of the series published by Silver, Burdett & Co. Part II provides in Spanish interesting information about Latin-American countries. The articles upon Argentina, Brazil, Cuenca, Costa Rica, and Peru are adapted from articles appearing in the publications of the Pan-American Union.

Wisconsin Teachers' and Young People's Reading Circles, 1916–17. State Reading Circle Board.

Very pleasing plan for directing reading of pupils and teachers.

Digitized by Google

THE SCHOOL REVIEW
A JOURNAL OF SECONDARY EDUCATION

VOLUME XXV OCTOBER 1917 NUMBER 8

PHYSICAL EDUCATION AND MILITARY DRILL: WHAT SHOULD BE OUR POLICY?

A SUPERINTENDENT'S REPORT

FREDERICK S. CAMP
Stamford, Connecticut

In a time like this, one responsible for the education of the young must keep his feet firmly planted upon solid ground. Patriotic feeling finds many expressions. The safest and most substantial expression is calm, clear-thinking, indomitable, introspective. "We must not confuse excitement with patriotism, the showy exhibition with real love of country."

The schoolmaster's work is in the present; his vision and reward are in the future. He must help to win a present war; he must plan and work for a future citizenship. A war won at the expense of the next generation would be futile.

We should therefore heed especially the lesson that Britain learned and points out to us: (1) enforce the attendance laws; (2) no exploitation of child labor; (3) more attention to physical education; and (4) what has been insisted upon by educational leaders for ten years is now seen equally by laymen as imperative, viz., educate for state and industrial needs in the name of state preparedness and state efficiency, if not of state salvation. (See quotation below, New York state law.)

This means a different kind of education, a different organization of our schools, a different attitude and temper on the part of

Digitized by Google

our taxpayers toward public expenditures for schools and school buildings.

But this report has to do especially with physical education and military training or drill. The following is a part of a communication from the United States Bureau of Education read to the School Committee at its meeting on May 1 and subsequently presented to the principals and published in the *Daily Advocate*, May 3, 1917:

THE GUIDING PRINCIPLES OF POLICY

One point I firmly believe should be impressed as strongly as possible on the public mind. That is: no interference with the program of public education should be made except under conditions of most absolute and final necessity.

Should we not bear in mind that the war itself is primarily a concern of this adult generation, and that the schools should be kept as free as possible from any unnecessary diversion from their fundamental task? Serious interruptions to that task cannot fail to burden unfairly the next generation.

Any suggestions for the alteration of the work of the schools should be tested on the point as to whether or not they are educationally desirable.

Let this be the general principle to guide us. As applied to the present need and demand for military training, it means that:

1. We must weigh the need of military training, which rests upon a present political sanction, against physical training, which rests upon a present and future political and educational sanction. "Military training and service are an obligation of citizenship, not of education alone."[1]

2. We must therefore define or explain the nature and amount of military training proposed to see if it is valid as education. ("Educational" is a broad term and must never be confined in thought to the schoolroom, the book-learning, and the "three R's.")

3. We must weigh the preparedness of the military training against the preparedness of training in the sciences, the mechanic arts, the social studies, and all else that occurs to mind as of peculiar state (i.e., political) value.

I have used the term "military training" in an inclusive sense. To discuss the three points above, it is necessary to define terms about which one finds some confusion of thought:

The comprehensive term "military education" and the term "military training," which is made more specific by its general use in military treatises

[1] Report of New Jersey Commission on Military Training in High Schools.

Digitized by Google

and reports, refers to the direct, practical, intensive training which is given to the recruit in the army, or to one who is preparing for actual warfare, as it is now carried on—a form of training which differs widely from that formerly in use. The term "military drill" has long been used to designate the exercises which in former years were intended to train the soldier, and included "training with a musket, manual of arms, and close order formation—in a word, an imitation of the sort of training which a young man receives at the armory when he goes into the militia." Because of the long use of the term in this way, and of its common acceptation in this sense, its limited application is retained in this report.

I. MILITARY TRAINING OR PHYSICAL EDUCATION?

In the sense of our definition it can be seen that only a small part of military training should be countenanced in our high schools. Such training is a man's job. To impose its rigors upon boys defeats its own purpose—to make the boys ultimately fit to be soldiers. Educationally it has the same relation physically as Sanskrit or mathematics of four dimensions in a high school has mentally.

II. WHAT PART OF MILITARY TRAINING IS VALID AS EDUCATION?

"*Drill.*"—The part of military training that may be called "drill" is another matter. The National Education Association Committee on Military Training objects to "drill" in the following:

We do not favor military drill, using the term as we have defined it, in elementary and secondary schools. If it is claimed to be military training, as it sometimes is, its military results are negligible, as most military authorities assert, and as may easily be determined when its exercises are compared with the vigorous and varied activities of actual training. That military drill gives little stimulus or inspiration for actual service is proved by the small number of cadets who enter the national guard when eligible. As a matter of fact, in the cases of most companies of cadets which have been maintained in schools for many years past, the military purpose has usually been concealed by teachers and ignored by parents, and arguments for their existence have been based upon claims of their general disciplinary value. If words mean anything, the serious, ultimate purpose of military drill must be efficiency in military service, altho this may be remote. There is just as much objection to disguising this purpose, if it exists, as to exaggerating its importance. If its purpose is not a military one, but personal discipline, the term is a misnomer and the word "military" should be omitted.

Military drill has been maintained in the schools of a number of cities of Massachusetts for many years. The opinion of the Special Commission on

Digitized by Google

Military Education of that state, referred to above, is therefore important. To quote the report: "The overwhelming weight of opinion from school teachers, military experts, officers of the regular army and the militia, and the general public is against military drill. It is generally agreed that the military drill which a boy receives in school is of little or no advantage to him from the point of view of practical soldiering. As far as available evidence goes, drill in the schools has had no beneficial effect in promoting enlistments in the militia except in a few isolated localities."

The ground of their opposition they state by quoting from the New Jersey report:

WILL "DRILL" TRAIN TO HABIT OF OBEDIENCE?

It is sometimes claimed that military training is the best agency for inculcating obedience. But if this claim is carefully considered, it will be found that obedience to military authority is generally unthinking. It is often blind and superficial, not real. During actual war, men willingly undergo training because the work is definitely motivated; but when peace comes and men go into barracks, they feel that there is nothing of value in drill and there is a consequent tendency to evade its requirements. This kind of obedience has been, and may be, secured by similar school methods. It is obedience under restraint. When this is removed, laxity in discipline often follows. *The discipline of the schools aims, not at isolated acts of obedience under special circumstances, but at the habit of obedience to elders and persons in authority. It is a psychological fallacy to suppose that obedience to military authority, obedience exacted under any peculiar circumstances, may automatically be translated into the general habit of obedience.* The same may be said of such qualities as alertness, promptness, industry, truthfulness, etc. It is by no means capable of demonstration that those who have had military training, or been subject to military discipline, are superior to other citizens in the possession of these qualities.

I asked the high-school teachers to report their observations in respect to these matters. "Observed instances" of improvement in punctuality, responsiveness to requests and orders, and orderliness in corridors and halls were asked; not opinions of what the effects should or might be. The company had been in existence only a month.

From these "observed instances" the following results were obtained: (*a*) four offered favorable evidence; (*b*) many others commented upon the matter favorably; (*c*) seventeen reported that they had not observed any evidences of improvement in punctuality, obedience, or orderliness; (*d*) several noticed an improved physical

Digitized by Google

bearing, and this is significant. It suggests, if it does not establish, the value of the company to our boys as a means of improving them physically.

Why we favor a high-school military company.—Why then should we support a high-school military company? First, because it is a strongly motivated means of inaugurating a systematic, physical education. Secondly, it trains in certain definite and desirable mental as well as physical reactions that will be mentioned further. Thirdly, it properly meets the inner spiritual and patriotic impulse of our boys to do something for their country. Fourthly, it works. And, as long as our teachers report that obedience on the drill floor does "carry over" to the classroom, let it alone.

In this connection, I quote from Lyman Abbott: "Liberty is voluntary and reasoned obedience to law." (The word "reasoned" I interpolate.) To inculcate this idea is one of the major aims of democratic education. It implies the recognition of law—society's general statement of its obligations and inhibitions—higher than any individual group. Any government must have obedient citizens or perish, but the note that differentiates a democracy is that the obedience of its citizens must be voluntary and reasoned, not coerced and unintelligent. Despite the fears of the educational psychologist, I believe in exercises that call for organized, co-ordinated obedience to leadership. The purpose and phrasing of the New York state revised (1917) law are "to develop correct physical posture and bearing, mental and physical alertness, self-control, disciplined initiative, sense of duty and the spirit of *co-operation under leadership*."

I believe, therefore, in athletics as the crown and capstone evidence of physical development. I believe that the peculiar mental reaction that can come only in accurate and immediate response to command (or external stimulus) is a worthy aim. We find it pre-eminently in physical and musical education.

In so far, then, as the nature of our military drill conforms to these educational purposes, it should be supported; when it ceases to conform, we should revise ideas.

How much "drill"?—What about the amount of drill? The West Point cadets for seven months of the year "drill" in the

Digitized by Google

gymnasium forty-five minutes a day. The methods of the director demand vigorous, alert, mental action, but of a different kind from that demanded in the classroom. It usually follows the most brain-wracking classroom study.

A very important point to know about this is that out of the forty-five minutes a very small proportion—only from twelve to fifteen minutes—is devoted to the purely military orders of marching, etc. Every exercise, whether those that are to be continued after graduation under army officers or not, has a physical educational value. Major Koehler, the director, gets the military promptness, alertness, and reaction to command through non-military commands. Physical education is the aim.

Abundant testimony from the highest authorities can be advanced to support the contention that health, strength, vigor, alertness, endurance, self-reliance, and self-control can be taught more effectively by a well-graded course in physical training than by any form of so-called military training.

The superior value of thoro physical training, not only in general, for all the purposes of life, but, what is particularly noteworthy in this discussion, for the specific purpose of preparing men for war, is acknowledged by military authorities.

I insert here the opinion of the secretary of our state board, Honorable Charles D. Hine, in a letter to the Superintendent:

My view is that military training ought to be in the regular course in every high school.

The main thing to be dwelt upon is physical strength, which is gained by exercises of the right kind. The army regulations contain the particular forms of exercise which are necessary for effective service in the army.

Everything which contributes to the strength of body and alertness of mind necessary to service in the army should be a part of the course. An hour a day at least should be given to instruction in this subject.

Military service is one of the duties of a citizen. In the last resort he may be called upon to fight as well as to vote and talk.

Secretary Hine rightly refers to the army regulations for "exercise of the right kind."[1] Therein may be found the kind of military exercises that have an equally great educational sanction. With a few discreet omissions, this, for the present, might well be our manual, even for children of the upper grades.

[1] *Manual of Physical Training, U. S. Army*, Government Printing Office, 1914.

Digitized by Google

We cannot agree, however, that "an hour a day at least should be given." As we have seen, even West Point does not give so much time. On this matter Major Koehler told us that he thought thirty minutes a day, of which ten might be devoted to the strictly military orders, should be sufficient.

III. SCHOOL: THE MOST IMPORTANT PREPAREDNESS INSTITUTION

But a more valid objection appears when we weigh the preparedness of the military with the preparedness found in our high-school studies.

The amount of time which must be devoted to special military training, whether it is conducted in or out of school hours, must be sufficient to make it of apparent value. ***This is bound to interfere with the pupil's progress*** in his school course. The pupil of the high school has entered the period when he must choose his career and has begun accordingly to specialize in his studies. He is devoting more time to self-selected study and work. For these all the time he can devote to them properly is needed. The added duty of military training must necessarily divert his attention from his aim of life, and take time which ought to be devoted to preparation for it, and must place too much emphasis on a special activity in which he will probably never be engaged.

Vocational Education as Preparedness

In recent years much attention has been devoted to vocational education, which has been encouraged and aided by state and national laws. Military training, by occupying the time and diverting the attention of the pupils, will greatly interfere with its development and operation.

New York State, whose lawmakers went into the matter rather precipitately, saw the force of this, so that their 1917 revision provides that

such requirement as to military training, herein prescribed may in the discretion of the commission be met in part by such vocational training or vocational experience as will, in the opinion of the commission, ***specifically*** prepare boys of the ages named for service ***useful to the state***, in the maintenance of defense, in the promotion of public safety, in the conservation and development of the state's resources, or in the construction and maintenance of public improvements.

Digitized by Google

Other opinion on this point has been expressed by Professor Willis R. Whitney, member of the United States Naval Consulting Board, in *Yale Review*, April, 1917. He says:

> A boundless opportunity for unlimited national *preparedness* lies in education, and this simple word describes our only sure way. If the education of our military camps, or if the manual of arms were a criterion, preparation would be the product of a few weeks' pleasant outing. . . . . But real preparedness is less narrow, and must be shared by many who never bear arms at all.

A high-school course in preparedness includes then nearly everything offered in the scientific-preparatory, the industrial arts, and the commercial courses. A brief consideration of the Connecticut Industrial Census questions will make this clear to anyone. Can one keep books for the Quartermaster Corps? Can one operate a wireless? dress a wound? cook for camp or for a convalescent soldier? run an automobile? draw a plan? read a blue-print? grow vegetables and till a plot of ground?

Our duty, therefore, is to emphasize, with all our powers of persuasion, that the conventional military drill for boys is relatively but a small part of patriotic preparedness and service. Every boy and girl in Stamford High School should be assigned to a division or course of work where he may be directly conscious of his part in national preparedness.

Our military enterprise, therefore, should not interfere with the more important industrial preparedness.

SUMMARY

The high-school military company.—We are keeping in mind these principles in connection with the high-school military company: (1) possible future enlistment or conscription of the older boys; (2) more rigorous work for boys over eighteen and physically strong; (3) consent of the parents before requiring exercises more arduous and exacting than the legitimate physical exercises; (4) athletics not to interfere as an additional physical activity; (5) duplication of activities to be discouraged; e.g., Boy Scouts are to give their first allegiance to their own organization.

Physical welfare.—In addition to the need of physical education, including sensible proportions of military drill, we should strengthen

Digitized by Google

our teaching of: (1) personal hygiene; (2) community hygiene and sanitation; (3) disease prevention; (4) patriotic and civic service.

These very important matters are found in our new community civics course of study. This study is now required by Connecticut state law.

In this connection, I suggested in the *Annual Report* of 1916, page 49, the desirability of co-ordinating the local agencies for health conservation.

To summarize:

1. The war presents no new problems to the schools; it rather indicates the old problems upon which to place our emphasis.

2. The emphasis should be placed especially upon physical and vocational education.

3. In placing such emphasis there should be "no interference with the program of public education."

4. Military training has no place in the public schools.

5. Military drill (*a*) is a small part of military training; (*b*) it cannot be justified upon the grounds of inculcating habits of obedience, alertness, promptness, industry, etc.; (*c*) it can be justified, however, upon the grounds of physical exercise and of "co-operation under leadership." For these reasons we should also indorse supervised athletics in which all may participate.

6. The amount of drill, however, bears a very small proportion of the time that should be devoted to physical exercise.

7. About half an hour a day should be devoted to physical exercises, including those exercises that are peculiarly military.

8. The most important emphasis, however, should be "specifically to prepare for service useful to the state."

9. Every pupil should be assigned "to do his bit" so that he may be directly conscious of his part in national preparedness.

Digitized by Google

THE IMPROVEMENT OF ABILITY IN THE USE OF THE FORMAL OPERATIONS OF ALGEBRA BY MEANS OF FORMAL PRACTICE EXERCISES

H. O. RUGG
School of Education, University of Chicago

AND

J. R. CLARK
Parker High School, Chicago

SUGGESTIONS AND DIRECTIONS FOR THE USE OF SUCH MATERIAL IN A CO-OPERATIVE EXPERIMENT IN THE TEACHING OF FIRST-YEAR ALGEBRA, CARRIED ON WITH A NUMBER OF PROGRESSIVE TEACHERS SEEKING TO IMPROVE THE TEACHING OF THE SUBJECT

Two important problems face every teacher of algebra as that subject is organized and taught at the present time: (1) the determination of effective ways of rationalizing the processes of algebra and of developing facility in the use of the most important algebraic devices—the equation, the formula, and the graph; (2) the determination of *economical* methods of teaching the formal operations to the extent that pupils in first-year algebra will have *satisfactory* skill in manipulating them. The general problem of improving the teaching of first-year algebra has been contributed to by the writers' research of the past four years. This classroom research has been based on the assumption that to aid in solving the general problem most completely we must set up an experimental program involving the following five steps:

1. Stating definitely the aims and outcomes of instruction in first-year algebra.

2. Classifying clearly the subject-matter of the course on a basis of the principal modes of learning involved in its mastery; a statement of the content of the course, from a standpoint both of the amount of material included and of the classification, arrangement, and order of presentation, supplemented by a detailed analysis of the mental processes called into play by different types of subject-matter.

Digitized by Google

3. *Designing and giving tests which will adequately measure ability in each of the fundamental phases of the subject-matter agreed upon.*

4. Critically evaluating the testing so as to give a complete and differentiated statement of fundamental weaknesses in learning (e.g., as revealed by the typical errors made by pupils).

5. Setting up experimental attempts to eliminate these fundamental weaknesses; from the standpoint of economy of time this means the determination of "best methods" of *rationalizing* these operations, *the design of practice exercises, the determination of specific "best ways" of presenting material, of order of presentation, and of optimum length of drills.*[1]

In an intensive investigation during the past four years the writers have carried through to tentative conclusion the first four steps in the foregoing program and are now initiating work on the fifth and most important step. A word of caution should be stated at this point: *We insist that the fundamental aim of instruction in first-year algebra is to develop in the pupil the ability to use intelligently the most powerful devices of quantitative thinking:* the EQUATION, the FORMULA, and the GRAPH. Only in so far as habituation or automatic efficiency in the formal processes contributes to efficiency in the solution of problems primarily of the reasoning or interpretive type do we insist upon skill or habituation in them. But there is evidence, both of expert opinion and of experimentation, to show that ability in the solution of new and original problems is accompanied by, and varies roughly with, *the degree to which the pupil has habituated these essential tool operations* (see article in *School Review*, February and March, 1917). We recognize, therefore, that this phase of the teaching process is only subsidiary to, although a *necessary* correlate of, the more fundamental aim stated above.

Carefully controlled tests of ability of pupils in first-year algebra, covering more than fifty school systems, have revealed: first, a very decided lack of skill in the manipulation of the formal operations; secondly, evident inability to use these operations successfully in their applications. It should be stressed that we recognize that the most important outcomes of the study of algebra are

[1] Both of the present writers are now carrying on, under typical public-school conditions, a classroom experiment of this sort. The results will be reported to readers of this journal several times during the next two years.

Digitized by Google

thought outcomes. We insist, therefore, that in order to give proper emphasis to this thought aspect *we must devise ways and means of reducing the undue amount of time now being given to the tool processes, in order to spend more time upon their application.* That is, our fundamental problem is both a problem of teaching emphasis and of proper distribution of time on the various aspects of teaching. Thus our immediate aim is to organize a teaching program that will result in increasing the pupil's efficiency in the use of the necessary tool operations with the expenditure of such a small amount of time that by far the larger proportion of time and energy can be put on the interpretive aspect of teaching.

The results of the testing and of the preliminary classroom experimentation of the past year have shown clearly that mass-instruction of the practice or drill types can be effectively given by means of formal practice exercises. Also that it will result in a very satisfactory proficiency in the tool operations with the expenditure of a relatively small proportion of the total class time. It should be stressed that formal drill can be given by means of this material without the use of more than ten minutes to fifteen minutes per day. Having experimented carefully with the use of tests and practice exercises the writers now wish to put these before teachers of algebra in the hope that they may aid in solving one of the important problems of mathematics teaching.

The purposes of the practice exercises[1] should be made clear at the start. They may be listed definitely as follows:

PURPOSES OF PRACTICE EXERCISES

1. In general, to make the pupil more efficient in his skill in manipulating the "tool" operations of first-year algebra.

2. To concentrate practice upon those operations that have been shown to be particularly difficult for the pupil, i.e., those types of problems in which the pupil makes the greatest number of mistakes (see table of typical difficulties in article in March *School Review*, referred to above).

3. To set up for the pupil and the teacher a definite, objective goal of achievement to be attained, *after which further practice will probably not yield results commensurate with the time required.*

[1] One card of the seven in the complete set is reproduced on p. 549.

Digitized by Google

4. To employ as a teaching device one of the most influential factors of learning, namely, short, spirited, frequent, "*timed*," practice periods.

STANDARDIZED PRACTICE EXERCISES
FIRST-YEAR ALGEBRA

Set. No. 9. Factoring continued
Standard: 12 "rights" in 6 min.

1. $3x^2-6x-24$
2. $9x^4-25y^6$
3. p^4-p^2-20
4. $p^2+5p+10$
5. $9x^2+12xy+4y^6$
6. $2y^6-6y-20$
7. $16r^6-49y^4$
8. x^6-x^3-12
9. c^6+3c+8
10. $25d^2+30dc+9c^2$
11. $5a^2-20a-60$
12. z^4-81w^6
13. y^6-y^4-30
14. $d^2+7d+11$
15. $49p^2+28pq+4q^2$
16. $3b^2-15b-150$
17. $4n^{20}-121x^8$
18. x^2-x-56

Set. No. 10. Quadratic Equations
Standard: 12 "rights" in 3 min.

1. $x^2-2x=8$
2. $b^2-b=6$
3. $x^2-36=0$
4. $n^2-5n-6=0$
5. $s^2+4s=21$
6. $b^2-4b=45$
7. $y^2-y=20$
8. $r^2-49=0$
9. $t^2-7t-8=0$
10. $x^2+6x=40$
11. $n^2-8n=33$
12. $p^2-p=12$
13. $s^2-25=0$
14. $y^2-9y-10=0$
15. $s^2+3s=54$
16. $x^2-7x=44$
17. $c^2-c=30$
18. $m^2-64=0$

Copyrighted and Published 1917
By H. O. RUGG and J. R. CLARK, CHICAGO, ILL.

5. To stimulate the pupil to compete against his own previous record, made definite and objective, and kept by himself as a measure of his own progress in the mastery of the subject-matter.

6. To help reduce, as much as possible, the great amount of time now being given to class drills, which careful measurement and individual experience show to be ineffective.

7. To provide a means by which individual differences may be practically recognized and met.

Digitized by Google

GENERAL PRINCIPLES OF DESIGN OF PRACTICE EXERCISES

1. We wish to make it clear that these practice exercises have been designed after detailed study of the *errors* of pupils. Pupils' errors are of two distinct types: (*a*) accidental errors, and (*b*) recurring errors. *It is the recurring errors that are significant* to the teacher who is trying to perfect the pupil's manipulation of the formal operations, and it is from a detailed study of these that the practice exercises have been designed. This study has enabled us to design exercises that would offer practice on the various operations somewhat closely in accordance with their relative difficulty. (The February and March [1917] numbers of the *School Review* contain a complete description of the work that has been done in testing pupils' abilities and in determining important types of errors.)

2. These exercises have been designed on the basis of the facts revealed by examination of the *achievements* of large numbers of pupils on the writers' "Standardized Algebra Tests."[1] That is, they have been designed to give the pupil practice on particular algebraic processes roughly in proportion to their difficulty, as shown by the number of pupils unable to solve them.

3. The limitations of space make a detailed explanation of the determination of the *standards* impracticable here. Suffice it to say—these standards are tentative and sufficiently low that approximately 50 per cent of the class will attain them on the fourth or fifth trial. The general principle underlying the establishment of the standards is that practice should not be extended beyond the point at which there ceases to be an increased efficiency, except for purposes of permanence or retention.

4. More problems have been included on each card than the number in the standard. They are arranged on a definite rotation scheme and *can be used as tests* if desired. This makes it feasible to begin with any problem in the list and work either way. By so doing the pupils are much less likely to remember the answer to particular problems.

5. Types of formal problems not necessary to the realization of the primary aim of instruction in first-year algebra stated above are *not* included here for practice. The writers question the advis-

[1] Published and distributed by the School of Education, University of Chicago, at 4 cents per set.

Digitized by Google

ability of such types of problems as division of polynomials by polynomials, factoring the sum and difference of two cubes, factoring by grouping terms, finding highest common factor, complicated combinations of fractions, etc. (list to be extended after further investigation).

SUGGESTIONS FOR THE USE OF THE PRACTICE EXERCISES

1. The foregoing discussion should make it clear that the practice exercises are in no wise intended to take the place of, nor to be given simultaneous with, the most thorough rationalization and explanation of the particular types of problems under consideration. They should be given *after* the class has clearly grasped the meaning and significance of the operation. The length of time devoted to getting this clear understanding of the various operations must necessarily vary with the teacher. Thus the time to begin the use of formal practice on any operation cannot be standardized for large groups of teachers. Each one must determine at what period he should turn to the use of the formal material.

2. We suggest that practice should be given on a particular exercise (e.g., the one on collecting terms if that operation has just been explained and discussed thoroughly) each day until 75 per cent of the class attains the standard number of problems set for that exercise, two days in succession. That is, excuse any individual pupil from practice on a particular exercise as soon as he has made the standard score twice in succession. Remember that these standard scores have come from the actual attainments of three large classes. They are set at the point attained by 50 per cent of the class on the third, fourth, or fifth trial, depending on the number of the exercise. If, after trying the scheme, the teacher is convinced that the standards are too low or too high, he may change them to suit his own purposes. The writers are convinced that skilful use of these exercises will tend to *raise* the standards in the future rather than to lower them.

3. The presence of rapid, average, and slow pupils in the same class necessitates a decision concerning the best use to make of the time of the rapid pupil. Acting on the principle that we want the "*optimum*" amount of *formal* skill, not the extreme amount of which the pupil is capable, we suggest excusing the pupil from the class

Digitized by Google

to work on problems of application or interpretation concerning those operations which have thus far been explained. That is, experience with both arithmetic and algebra exercises is proving that it is better to give the fast pupil *intensive* training with each operation, both "formal" and "applied," rather than to permit him to move on at once to the learning of other types of subject-matter. In this way *the members of the class are held together as regards formal skill* (which we emphasize as a fundamental principle) but *are permitted to get as much facility as they are capable of in the use of algebraic devices in thinking situations*. Thus the fundamental doctrine is: "limitation of training" in formal skills in order that the utmost possible opportunity may be given the bright pupil for developing his power to meet "problem" situations.

In order to excuse the rapid pupil from the practice exercise the teacher must have "problem" work of some kind at hand from which to make assignments. Teachers will do well to make a detailed study of this aspect of the general procedure, and will be amply repaid if they collect and classify carefully problems which will give varying opportunity for application and interpretation. The writers will be in a position shortly to make suggestions on this aspect of the teaching problem.

4. With the standard skill once attained on a given operation the *drill time* of the class goes most largely to a new operation. The teacher, however, faces the problem of giving "*review*" *practices* to "*hold the skill.*" The writers are now experimenting carefully in order to be able to make detailed suggestions as to the best intervals to leave between the practices. In the meantime the decision must be left largely to the initiative of the individual teacher. It is probable, however, that it will be helpful to review a given exercise under "time" conditions *as often as once a week.* On the whole it is important to make the use of the exercises very *flexible* and to fit their use to the needs and abilities of the individual class.

CLASSROOM PROCEDURE

In the specific classroom handling of the practice material the writers have found it helpful to keep in mind the following suggestions:

Digitized by Google

1. Economize time in passing and collecting cards. Let the first pupil in each row place the card for the day's practice on the desk of each pupil with the "*problem side*" *up*. Immediately at the close of the practice period let the last pupil in the row collect the cards in that row. Systematize the procedure from the first day.

2. Make all directions *before* the cards are passed. From the start impress it on the pupils that any study of the exercise on their desks before the teacher's signal "go" is unfair. The work of the pupil is to be done on a blank sheet of paper against which the practice card is placed. Caution the pupils *not* to write on the card itself.

3. To prevent memorizing answers to examples on successive days, change the number of the example with which the class begins; i.e., if they begin with the first example on the card today, tomorrow they may begin with the fourth, the sixth, or with the last one on the card and work backward toward the first.

4. With all pupils ready, start all to working at the signal (e.g., "go"). To be effective the exercise must be a "time-drill." It is of the utmost importance that the teacher time the exercise accurately. Always start the class at the even minute or half-minute by your watch. Long experience has shown us that it takes the greatest care to conduct these exercises effectively. Make sure that each pupil *stops exactly* at the signal "stop."

5. One of the most valuable outcomes of the use of the practice material is the part that the pupil takes in correcting the work, noting his mistakes and recording his own achievement and comparing it with the standard and with the achievements of other pupils in the same class. Thus systematize from the start the scoring, recording, and criticizing of the work done. Have the pupils exchange papers *immediately at the word "stop."* The answers to the examples are printed on the back of each card in the exact order of the examples themselves. The pupil turns his card over, lays the "answer side" against his neighbor's work and checks each answer. He then writes the number of "Attempts" and "Rights" on the paper and passes it back to the owner. The latter then records his score in "Attempts" and in "Rights" on

Digitized by Google

his *record card*. At irregular intervals and *always* when a pupil has made the standard score the teacher will need to check the accuracy of the pupil's work.

6. The teacher can stimulate interest in self-improvement by various devices. A helpful one is: have those who made the standard score hold up their hands, commend their work, and raise the question with the rest as to how many can do better the next day. The teacher will find that a *human* interest on his part in the pupils' scores will be a great stimulus to increased effort on their part.

7. Teachers should keep the practice cards and the record cards except during practice periods.

THE COST IN MONEY TO THE TEACHER WHO INVESTS IN THIS PRACTICE MATERIAL[1]

The writers believe that practice material in any experimental stage should *not* be commercialized. Their practice exercises have been designed after careful experimentation and great labor, in the firm belief that they will aid in improving the teaching of elementary algebra. The financial charge for these to the teacher has been set, therefore, at that minimum figure which will barely cover the cost to the writers for (1) printing, (2) handling, and (3) the expense of conducting the co-operative study next year. The charge worked out on this *cost basis* has been set at:

9 cents per set of 7 practice cards each
½ cent per pupil record card

A teacher in ordering will need: (1) *as many sets of practice cards as she has pupils in her largest class*, with perhaps a few more to cover wastage; (2) a pupil record card for *each different pupil* in her classes. Thus, if a teacher's largest class is 25 and she has 60 different pupils the entire cost to her will be $2.55. It is undoubtedly true that a set of cards will last two or three years—perhaps more. The foregoing charge can be reduced with future revised editions in case the sale of the exercises justifies a large printing. The present cost, small as it is, could have been reduced if it had been possible to venture a large printing of the set. It will be noted that these cards have been copyrighted. This has been done to protect them from premature commercialization and strictly in the interest of the scientific study of methods of improving teaching in algebra.

[1] The "Practice Exercises" are distributed by H. O. Rugg, School of Education, University of Chicago.

Digitized by Google

THE PERSISTENCY OF ERROR IN ENGLISH COMPOSITION

ROY IVAN JOHNSON
Kansas City Junior College, Kansas City, Missouri

THE PURPOSE AND PLAN OF THE STUDY

The prime purpose of this study is to determine the relative persistency of technical errors in English composition through the four years of high school. Many charges of inefficiency—some just and others probably unjust—have been made against the course of instruction in English composition. But before such charges can be either substantiated or denied, it is necessary to make some systematic measurement of the progress of the pupils. Since the learning of good English means, in most cases, the unlearning of bad English, the advancement in English ability may be stated in terms of the elimination of error. To determine the *degree* of this elimination, therefore, is our present problem.

Points of minor concern that will be emphasized in the course of the study are: (1) the constancy of error, (2) the increase in composition speed, (3) the relative difficulty in different forms of discourse, and (4) the relation of speed to accuracy. These matters, however, are to be considered incidental to the main purpose. They may be called the *secondary* objects of the investigation, the *primary* one being to determine the extent to which incorrect habits of writing persist and what shift in emphasis is necessary in the high-school English composition course to meet this persistency.

The study being a comparative one, it was necessary to have two compilations of data, one made from a body of written material furnished by high-school Freshmen at the beginning of the year and the other made from a like body of material furnished by pupils who had finished the high-school course. To obtain the first materials of the study it was decided to select a group of Freshmen from each of the four high schools of Kansas City, Missouri, and to give to each of these groups during the same week of

Digitized by Google

school three successive class exercises, each fifteen minutes in length.

On the first day of the three, the following instructions were given to the pupils: "Tell about any incident suggested by (1) 'Missing the Train,' (2) 'A Day's Journey,' or (3) 'A Lucky Mistake.'"

The next day the instructions were: "Describe (1) a person you know, (2) any scene which has impressed you, or (3) a department store during the busy hour."

The instructions for the third and last exercise were: "Explain (1) how to use a dictionary, (2) how you would spend a vacation at home to the best advantage, or (3) your idea of a Freshman's responsibilities."

In each case the papers were collected promptly at the end of fifteen minutes.

After eliminating the papers of the pupils who were not present on all three days, it was found that this plan furnished 132 complete sets of exercises aggregating 50,371 words.[1]

The second necessary body of material was collected from sixty-six Freshmen of the Kansas City Junior College. The same topics and the same instructions were given, and the same time was allowed for the writing. Sixty-six complete sets of exercises, with a total of 32,693 words, were obtained. These sixty-six Freshmen had all completed the high-school course. Practically all of them were graduates from the Kansas City high schools.

It is upon an analysis of this material—50,371 words of composition from high-school Freshmen of Kansas City and 32,693 words of composition from high-school graduates of Kansas City—that our conclusions regarding the persistency of error in English composition must be based.

COMPILING THE DATA

1. *The category of error.*—In tabulating the errors, it was necessary to decide upon some sort of classification. First, a

[1] Acknowledgment of ready and helpful co-operation in the matter of securing this material is made to Miss Marshall, Miss Carpenter, Mr. Kiser, and Mr. Goodale, of the Kansas City high schools.

Digitized by Google

temporary working list of errors was made. This was modified from time to time as new kinds of mistakes appeared in the papers, until, finally, when the tabulation was completed, it was found that forty-seven different headings had been utilized. These forty-seven kinds, however, grouped themselves by the laws of natural relationship into fourteen major classes, or types—if the inevitable miscellaneous group can be said to constitute a type.

Only technical errors, of course, were included in the tabulation: errors that relate to the "mechanics of writing," such as errors in grammar, spelling, the use of the apostrophe, etc. The thought of the sentences and paragraphs was not criticized, unless by some violation of grammatical principle it was rendered ambiguous or otherwise confusing in meaning. Furthermore, no *doubtful* errors were tabulated. Anything about which there is a common difference of opinion, such as the observance of some of the mooted rules of punctuation or the use of simplified spelling, was omitted from the study.

Table I is a list of the kinds of error found in the material examined. In this table the errors are numbered. When they are referred to later in the study, *the numbers of this table will be used to designate them.* In most cases an explanatory example of the error is given.

2. *Distribution of errors according to kinds.*—With the foregoing list as a basis, all the errors in the 83,064 words of manuscript were carefully classified. Table II shows the results. Numbers instead of names are used to indicate classes of error. The numbers may be interpreted by reference to Table I.

Table II shows the total results for *all* of the exercises. The results for the individual exercises are found in Table III. Only the major classes of error are used in this table.

3. *Distribution of individuals according to quantity of error.*—By grouping the pupils according to the total number of errors committed by each in the three exercises, the frequency Charts I and II were obtained. It will be observed that in Chart I the median falls at approximately $13\frac{1}{4}$, while in Chart II (representing the distribution of college pupils) the median has moved two errors to the left and stands at $11\frac{1}{4}$. It will be seen also that the *low*

Digitized by Google

TABLE I

THE CATEGORY OF ERROR, MADE FROM AN ANALYSIS OF THE MATERIALS OF THIS STUDY

I. MISTAKES IN THE CASE OF PRONOUNS:
   1. Subject or object of verb in wrong case. *She saw my brother and I.*
   2. Predicate nominative in wrong case. *I do not know whom he is.*
   3. Object of preposition in wrong case. *They called to my friend and I.*
   4. Use of objective for possessive with gerund. *It was all the result of that cat crossing my path.*

II. OTHER MISUSES OF PRONOUNS:
   5. Disagreement of pronoun and antecedent. *A person can find what they look for.*
   6. "You" used indefinitely. *When you start to high school you feel important.*
   7. Miscellaneous misuses of the pronoun. *A lady which . . . . etc.*

III. MISTAKES IN THE USE OF VERBS:
   8. Disagreement of verb and subject. *On the bank was some water lilies.*
   9. Change of tense in main clause.
   10. Wrong past tense or past participle. *We had drank.*
   11. Wrong verbs used. *I will lay down.*
   12. Mistakes in mood. *He acted as though he was the king's son.*

IV. MISTAKES IN THE USE OF ADJECTIVES AND ADVERBS:
   13. Use of adjective for adverb. *He spoke respectful.*
   14. Use of "most" for "almost." *I go most every time.*
   15. "Only" misplaced in the sentence. *I only had one lesson to study.*
   16. The use of the double negative. *There wasn't hardly room for me.*
   17. Miscellaneous misuses of adjectives and adverbs. *It was a very healthy food.*

V. MISTAKES IN THE USE OF PREPOSITIONS AND CONJUNCTIONS:
   18. Use of wrong or superfluous preposition. *He got off of the car.*
   19. Use of wrong conjunction. *The reason was because . . . . etc.*
   20. Misuse of "like." *It looks like he wasn't coming.*

VI. UNGRAMMATICAL SENTENCE STRUCTURE:
   21. Incomplete sentence.
   22. Failure to make new sentence for new thought.
   23. Miscellaneous mistakes in sentence structure.

VII. FAILURE TO EXPRESS CLEAR MEANING:
   24. Ambiguity due to indefinite pronominal reference. *He had to eat olives with the Smith girls although he didn't like them.*
   25. Awkward, "wordy," or complicated phrasing.
   26. Other cases of failure to express clear meaning. *Her mother cooked a dozen eggs and twice as much bacon.*

Digitized by Google

TABLE I—*Continued*

VIII. MISTAKES IN PUNCTUATION:
- 27. No period.
- 28. Members of series not separated.
- 29. Independent clauses of compound sentences not separated.
- 30. No punctuation after introductory expression. *Well how are you?*
- 31. Name of city and state written without punctuation. *Kansas City Missouri.*
- 32. Miscellaneous mistakes in punctuation.

IX. MISTAKES IN THE USE OF THE APOSTROPHE:
- 33. Failure to distinguish between "it's" (it is) and "its" (possessive). *The bird will not do it's best singing if its a cloudy day.*
- 34. Wrong form of possessive nouns. *There was a sale of ladie's dresses.*
- 35. "O'clock" written without an apostrophe.
- 36. Miscellaneous misuses of the apostrophe. *I dont know.*

X. MISTAKES IN CAPITALIZATION:
- 37. Failure to use capital letter.
- 38. Improper use of capital letter.

XI. CARELESS OMISSION OR REPETITION:
- 39. Omission of word or phrase.
- 40. Omission of letter or syllable.
- 41. Repetition of syllables, words, or phrases.

XII. MISTAKES IN SPELLING:
- 42. Compound words incorrectly written.
- 43. Misspelling of "to," "too," and "two."
- 44. Misspelling of "their" and "there."
- 45. Other misspelled words.

XIII. MISUSE OF QUOTATION MARKS (46).

XIV. MISCELLANEOUS ERRORS (47). *Doctors, lawyers, teachers, etc.*

end of the chart (i.e., extremely large number of individual errors) has been eliminated in Chart II.

THE VALIDITY OF THE MATERIAL

1. *Constancy of error.*—It may be urged that not enough material has been used as the basis of this investigation to determine accurately the amount of error normally characteristic of the written work of the pupils. It will be found, however, that the number of errors committed by the pupils in the different exercises does not vary greatly. This is sufficient to attest the adequacy of the material. In an elaborate investigation of the errors of the sixth

Digitized by Google

TABLE II

DISTRIBUTION OF ERRORS ACCORDING TO KINDS

Primary Classes of Error	Secondary Classes of Error	Errors of 132 High-School Freshmen		Errors of 66 College Freshmen	
I	1	11	4	2	0
	2		0		1
	3		3		0
	4		4		1
II	5	102	15	40	7
	6		80		32
	7		7		1
III	8	93	39	32	10
	9		8		3
	10		32		12
	11		12		6
	12		2		1
IV	13	52	26	28	6
	14		9		7
	15		2		7
	16		0		1
	17		15		7
V	18	50	32	24	20
	19		7		3
	20		11		1
VI	21	220	27	32	0
	22		121		14
	23		72		18
VII	24	46	8	17	4
	25		5		1
	26		33		12
VIII	27	232	17	100	4
	28		24		11
	29		23		5
	30		13		11
	31		19		7
	32		136		62
IX	33	150	9	75	4
	34		64		57
	35		38		9
	36		39		5
X	37	196	88	120	86
	38		108		34
XI	39	223	97	77	39
	40		111		35
	41		15		3
XII	42	675	136	208	47
	43		25		5
	44		24		2
	45		490		154
XIII	46	25	25	9	9
XIV	47	85	85	23	23
Total	.....	2,160	2,160	787	787

Digitized by Google

and seventh grades of the Kansas City schools, Dr. Charters[1] collected all the material in the form of written exercises handed in by the pupils during one month. After the study was completed, however, he stated that a single paper of 150 words from each pupil would have been sufficient to determine dependable results for him.[2]

TABLE III

DISTRIBUTION OF ERRORS IN THE THREE EXERCISES

MAJOR CLASSES OF ERROR	HIGH-SCHOOL FRESHMEN			COLLEGE FRESHMEN		
	Exercise 1	Exercise 2	Exercise 3	Exercise 1	Exercise 2	Exercise 3
I	4	5	2	1	1	0
II	10	34	58	6	12	22
III	46	26	21	13	9	10
IV	19	19	14	11	9	8
V	24	16	10	9	7	8
VI	86	60	74	11	7	14
VII	21	10	15	11	5	1
VIII	108	68	54	39	31	39
IX	78	44	28	41	16	18
X	55	60	81	40	42	38
XI	89	66	68	18	32	27
XII	234	250	191	73	78	57
XIII	7	8	10	3	3	2
XIV	23	28	34	7	8	8
Total	806	694	660	283	262	242

In order to demonstrate fully the reliability of the material it will be necessary to enter at some length into a discussion of the constancy of error both in quantity and in type. Table IV shows the word-totals and the error-totals for the three exercises.

The mean deviation of the exercises from their average number of errors is 8 per cent for the high school and 5 per cent for the college. The reason for the smaller deviation in the college papers is probably that the word-totals of the three exercises are more nearly equal than they are in the high-school body of material.

Considering now the *individual deviation* of the pupils in the number of errors found in the three exercises, we find 34 per cent and

[1] *University of Missouri Bulletin*, XVI, No. 2. "Education Series," 9.

[2] This is stated merely as an opinion arrived at after an examination of the data. Dr. Charters does not discuss fully his reasons for such a conclusion.

Digitized by Google

31½ per cent to be the means of the coefficients of dispersion for the respective groups. When one considers the fact that the field of error is not limited in these exercises by specific test questions relating to any certain kind of mistake (as: "Supply the proper form of the pronoun in the following blanks") it is remarkable that the coefficients of dispersion are not larger.

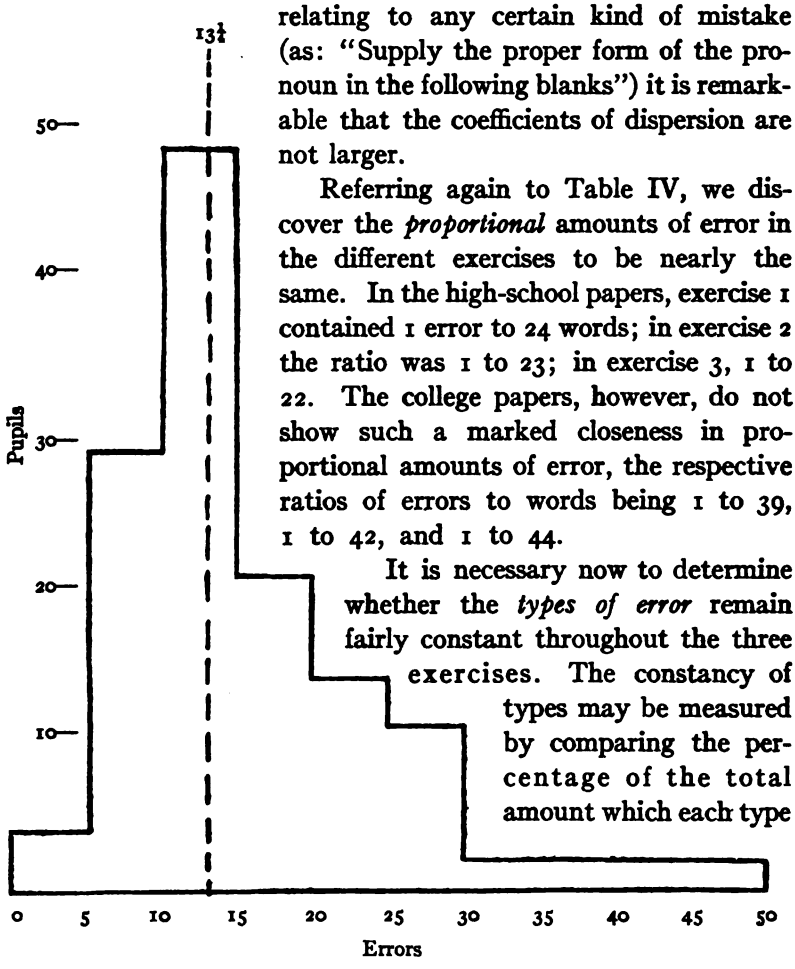


CHART I.—Showing distribution of 132 high-school Freshmen according to number of errors made.

Referring again to Table IV, we discover the *proportional* amounts of error in the different exercises to be nearly the same. In the high-school papers, exercise 1 contained 1 error to 24 words; in exercise 2 the ratio was 1 to 23; in exercise 3, 1 to 22. The college papers, however, do not show such a marked closeness in proportional amounts of error, the respective ratios of errors to words being 1 to 39, 1 to 42, and 1 to 44.

It is necessary now to determine whether the *types of error* remain fairly constant throughout the three exercises. The constancy of types may be measured by comparing the percentage of the total amount which each type constitutes in one exercise with the percentage which it constitutes in both the other exercises combined. This percentage relationship may be computed from Table III.

Digitized by Google

By averaging the differences in percentage, a table of constancy may be constructed as shown in Table V. The items in the table show the average fluctuations of the different types of error. Each fluctuation indicated in the table is the arithmetic mean of the differences in percentage of total amount.

For the high-school exercises the arithmetic mean of the fluctuations is 1.7−, for the college exercises, 1.7+.

Considering the fact that the whole field of English error was left open by the nature of the exercises, we are justified in holding that the degree of constancy of error-types, as manifested by these results, is remarkably high.

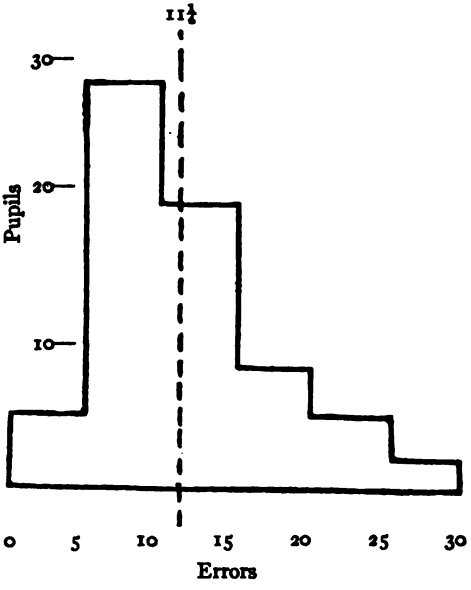


CHART II.—Showing distribution of 66 college Freshmen according to number of errors made.

TABLE IV

TOTALS

(Three Exercises)

EXERCISE	HIGH-SCHOOL FRESHMEN		COLLEGE FRESHMEN	
	Errors	Words	Errors	Words
1.....	806	19,856	283	11,004
2.....	694	16,111	262	10,939
3.....	660	14,404	242	10,750
Total.....	2,160	50,371	787	32,693

Classes II, VIII, IX, and XII exhibit the greatest degree of variation in the high-school exercises. But as Classes XII and VIII (spelling and punctuation) constitute nearly 40 per cent of the

Digitized by Google

total amount of error, the 4 per cent of fluctuation becomes less significant than a smaller percentage might be in connection with a less prevalent type.

TABLE V

CONSTANCY OF ERROR-TYPES SHOWING AVERAGE FLUCTUATION OF EACH TYPE

Type of Error	Fluctuation in High-School Papers	Fluctuation in College Papers
XII	4.5	3.2
VIII	2.9	2.4
XI	0.6	3.4
VI	1.1	1.5
X	2.4	1.1
IX	2.9	5.3
II	3.7	3.7
III	1.4	0.6
XIV	1.4	0.5
IV	0.4	0.3
V	.07	0.4
VII	0.6	1.6
XIII	0.5	0.1
I	0.2	0.3

The only other classes of error whose variation, as shown in Table V, is more than 2½ per cent are II and IX (mistakes in pronouns and the use of the apostrophe). These two cases can be explained by modifying elements in the subject-matter. Under mistakes in pronouns (Class II) was classified the indefinite use of "you" for third person. It is natural, apparently, to use this form when "you" are explaining something. In a simple narrative occasion for its use does not arise so often. The third exercise ran high in the misuse of the pronoun (Class II). This is due to the fact that the third exercise was *expository*, and the indefinite "you" became the favorite way in which to begin the theme. In Class IX mistakes in the use of the apostrophe, exercise 1, ran high. A glance at the subjects used for exercise 1 explains this. One of the most popular titles was "A Day's Journey." Thus the possibility of the mistake was thrown directly in the pupil's way. The result is seen in the comparatively large amount of fluctuation in that type of error.

If it were not for these unfortunate modifying elements in the subject-matter of the exercises, it is quite probable that the arith-

Digitized by Google

metic mean of the fluctuations would be less than 1 per cent instead of 1.7 per cent. However, the table shows, regardless of these facts, a much higher degree of constancy among the recurring types of error than one might expect from a test so general and unrestricted as were these three exercises. It tends to establish the point made by Mr. Charters, that for purposes of group study a single paper of 150 or 200 words from each individual will furnish sufficient data from which to determine dependable results.

2. *Comparison of high-school data with similar data for Grades VI and VII of the Kansas City Schools.*—A comparison of the data obtained from the high-school Freshmen's papers with the results of the Charters investigation of the written work of the sixth and seventh grades shows a remarkable similarity in the percentages of error found, wherever the classification of error is such as to render the results comparable. Mr. Charters directed the examination of 4,819 pages of manuscript collected from pupils in the sixth

TABLE VI

COMPARISON WITH CHARTERS' DATA ON FIVE CLASSES OF ERROR

Class of Error	Grades VI and VII 4,819 Pages	Grades VI and VII 288 Pages	High-School Freshmen 288 Pages
1. Case forms	139	8.3	7
2. Disagreement of verb and subject	753	45.0	39
3. Wrong verb	265	11.6	12
4. Wrong use of mood	61	3.6	2
5. Apostrophe in possessive	744	44.5	64

and seventh grades of twelve different schools of Kansas City.[1] Estimating the high-school material of the present study in terms of pages (allowing 175 words to a page) the three sets of exercises are found to aggregate 288 pages. Selecting the points of identity in the working list of errors used by Mr. Charters and the classification employed for purposes of this study, we find the five following types: (1) case forms, (2) disagreement of verb and subject, (3) use of wrong verb, (4) improper use of mood, and (5) failure to use apostrophe properly in denoting possession. Table VI shows the comparison of these five items of error.

[1] See *University of Missouri Bulletin*, XVI, No. 2. "Education Series," 9.

Digitized by Google

The close similarity between the corresponding numbers in the last two columns of Table VI helps to establish the reliability of the first-year high-school data. The most appreciable difference in the two columns lies in No. 5, errors in the use of the apostrophe in the possessive. Here we have a 46 per cent increase in high-school error over sixth- and seventh-grade error. This, however, is explained by the fact that "A Day's Journey" was one of the subjects used in the high-school exercises and that 37 per cent of the pupils chose to write on that subject, thus inviting the opportunity for the commission of that particular error.

3. *The representative character of the Freshman high-school group.*—Furthermore, the grades of the 132 high-school Freshmen tend to establish the *representative character* of the group. The grade distribution fairly approximates that of all the Kansas City Freshmen.[1]

4. *Summary.*—Therefore, the small average deviation of the three exercises from the average number of errors committed; the constancy of the ratio of the number of errors to the number of words; the fact that the coefficient of dispersion shows a tendency of pupils to be fairly consistent in the amount of error they commit; the marked constancy of recurring types of error; the striking comparison with the results of the Charters investigation of written error in the sixth and seventh grades of Kansas City, and the representative character of the high-school group examined tend to establish the validity of the materials used in this study and to justify their use as a basis for comparison and generalization.

COMPARISON OF DATA

1. *Ranking errors according to prevalence.*—By an examination of Table II it is easy to discover the most prevalent types of error in the two groups. Ranking the major divisions according to the number of errors classified in each, we find the results shown in Table VII.

Table VII shows an average difference in rank of approximately 1.15. The high degree of uniformity in rank indicates a slightly

[1] The data upon which to base such comparison were obtained through the kindness of Mr. George Melcher, director of the Kansas City bureau of research and efficiency.

Digitized by Google

variable relationship existing among the classes of composition error. To emphasize further this uniformity a rank correlation table, Table VIII, is inserted.

TABLE VII

RANKS ACCORDING TO AMOUNT

CLASSES OF ERROR	NUMBER OF ERRORS		HIGH-SCHOOL RANK	COLLEGE RANK	DIFFERENCE IN RANK
	High School	College			
I.....	11	2	14	14	0
II.....	102	40	7	6	1
III.....	93	32	8	7	1
IV.....	52	28	10	9	1
V.....	50	24	11	10	1
VI.....	220	32	4	8	4
VII.....	46	17	12	12	0
VIII.....	232	100	2	3	1
IX.....	150	75	6	5	1
X.....	196	120	5	2	3
XI.....	223	77	3	4	1
XII.....	675	208	1	1	0
XIII.....	25	9	13	13	0
XIV.....	85	23	9	11	2

2. *Comparison of proportional amounts of error.*—The grand totals (2,160 errors of the high-school Freshmen and 787 errors of the college Freshmen) show a decrease for the college of 22½ per cent of error. This does not adequately represent the relationship between the two groups, however, on account of the fact that the comparison disregards the *amount* of material from which the data were compiled. It assumes equal speed in writing on the part of high-school Freshmen and college Freshmen. Estimating the college errors proportionally (on the basis of 50,371 words), the results shown in Table IX are found.

3. *The factor of high-school elimination considered.*—Table IX does not take into account the fact of high-school elimination. The comparisons are based upon the assumption that the college group is, or was, the same in general ability as the high-school group. This has been proved, however, to be an erroneous assumption. A study of qualitative elimination in the Chicago schools[1]

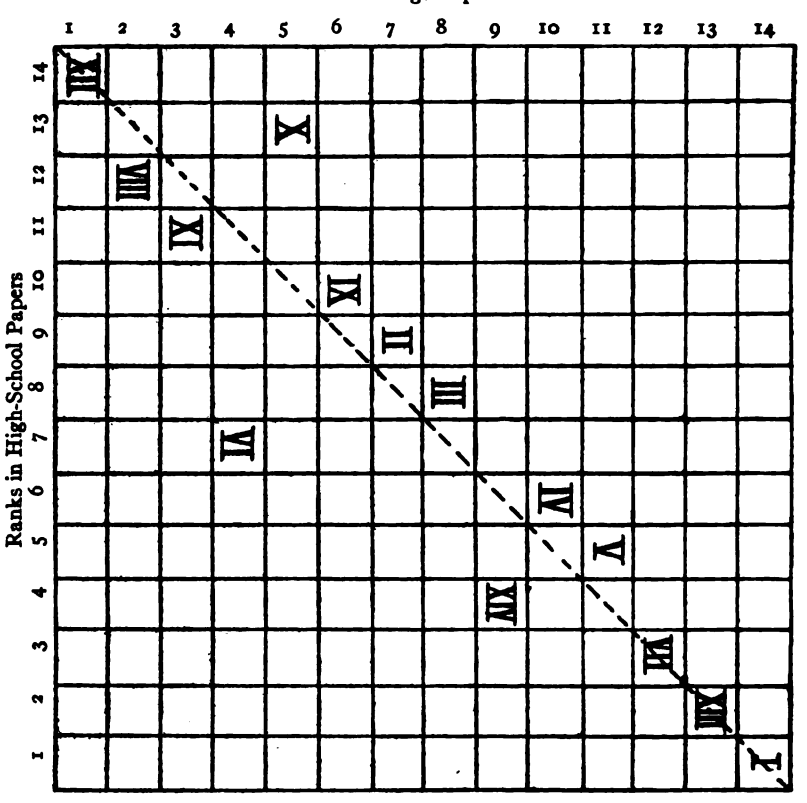
[1] George R. Johnson, *Qualitative Elimination* (Thesis). University of Chicago.

Digitized by Google

from 1905 to 1909 establishes the fact that there is a very close correlation between elimination and low grades—especially low grades in English. Practically 90 per cent of the Freshmen receiving inferior grades in English were eliminated.

TABLE VIII

RANK CORRELATION TABLE SHOWING THE DEGREE OF UNIFORMITY IN RANKS OF ERRORS ACCORDING TO PREVALENCE IN THE TWO BODIES OF MATERIAL. NOTICE THAT THE LINE OF RANKS APPROXIMATES THE DIAGONAL OF THE TABLE



The consideration of this fact will, of course, affect the results of our present study. Allowing a 20 per cent margin for possible modifying local conditions, we shall suppose that only 70 per cent of the low-grade pupils of the high-school Freshman group would be

Digitized by Google

eliminated in high school. This will leave but 10 pupils of inferior grade to be considered.[1]

TABLE IX

COMPARATIVE CLASS DISTRIBUTION OF ERRORS (COMPUTED PROPORTIONALLY) SHOWING DECREASE IN PERCENTAGE

Classes of Error	High School	College	Decrease
I	11	3.0	72.7
II	102	61.6	40.0
III	93	49.0	47.0
IV	52	43.0	17.3
V	50	37.0	26.0
VI	220	49.0	77.7
VII	46	26.0	43.5
VIII	232	154.8	33.0
IX	150	115.5	23.0
X	196	184.8	5.7
XI	223	118.6	47.0
XII	675	320.3	52.5
XIII	25	13.8	44.8
XIV	85	35.4	58.3

Subtracting the number of errors made by 22 inferior pupils (70 per cent) taken from the group at random and calculating the college error on the basis of 110 pupils instead of 66, we have Table X. It should be stated also that the word basis was equalized for the two groups and the errors of the college Freshmen were computed proportionally.

In comparison of Tables IX and X it is seen that the greatest changes occur in Class IV (mistakes in adjectives and adverbs) and Class VII (failure to express clear meaning).[2] Class X is also noticeable in that it, like Class IV, changes from *decrease* to *increase* in the fourth column of the table.[3]

[1] In response to inquiry, 6 of the 66 college Freshmen reported having received low grades in English in the high school. After eliminating 70 per cent of the inferior high-school Freshmen, 110 pupils were left for consideration. Ten of these were inferior in grade. It happens, therefore, that the percentage of inferior pupils in the two groups is the same (66:6::110:10).

[2] This indicates that the failure to express clear meaning in sentences is one of the pronounced characteristics of inferior pupils in English.

[3] For ranks according to decrease, as shown in the fourth column of Table X, see Chart V.

Digitized by Google

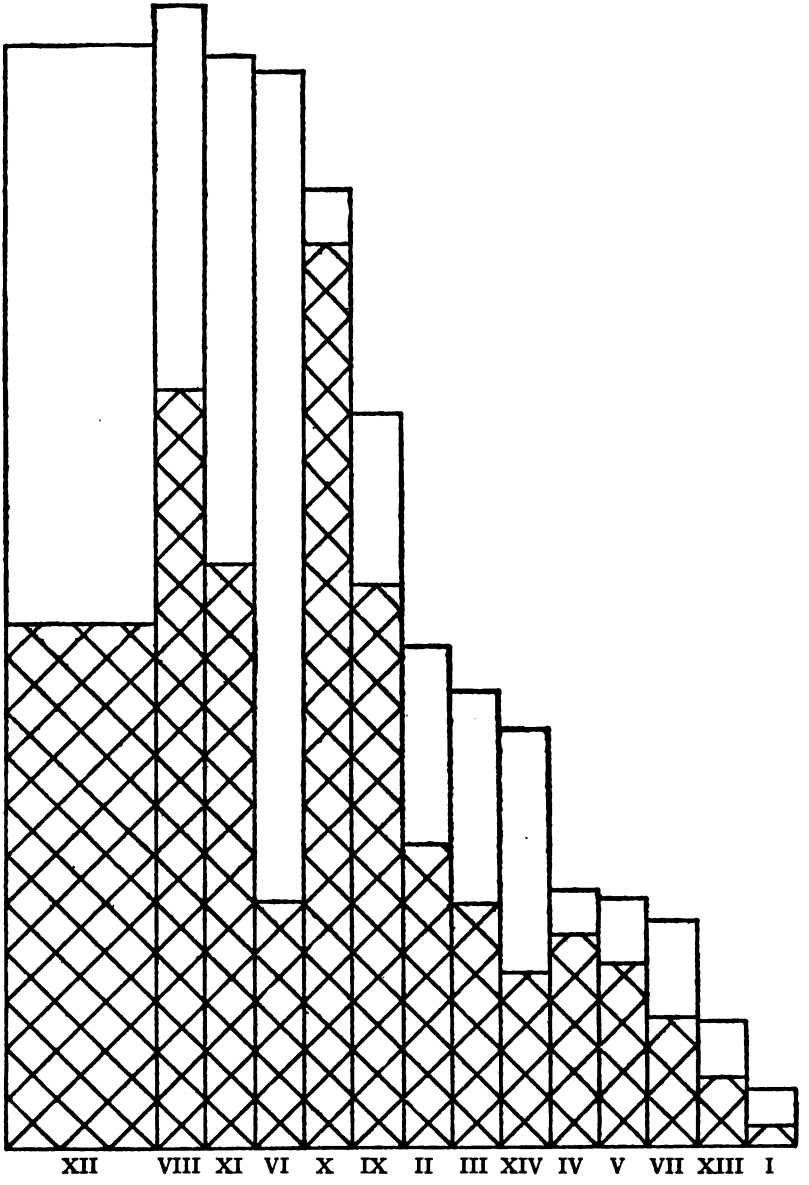


CHART III.—This chart shows the relative amount of each kind of error made by high-school Freshmen and college Freshmen. The entire chart represents high-school error; the checked part of the rectangles represents corresponding college error. This chart is made from Table IX.

Digitized by Google

4. *The persistency of error.*—From the data of the foregoing tables the fourteen major classes of error may be ranked according to the amount of elimination occurring in each. This elimination is shown in terms of percentage in Tables IX and X—in Table IX *before* the factor of qualitative elimination was considered and in Table X *after* it was considered as a modifier of results. Charts IV and V, made from these respective tables, show the relative amount of decrease (or increase) characteristic of each type of error. Notice

TABLE X

PROPORTIONAL CLASS DISTRIBUTION OF ERRORS (AFTER THE FACTOR OF HIGH-SCHOOL ELIMINATION WAS CONSIDERED).

Classes of Error	High-School Pupils (110)	College Pupils (110)	Decrease in Percentage
I	7	2.0	71
II	82	52.5	36
III	66	41.4	37
IV	33	36.7	11 *incr.*
V	40	31.5	21
VI	162	41.4	74
VII	39	22.5	17
VIII	183	131.3	28.3
IX	118	98.5	16.5
X	148	157.6	6.5 *incr.*
XI	177	101.0	43
XII	519	273.0	47.4
XIII	22	11.8	46.3
XIV	65	30.0	54

that in Chart V, Classes IV and X fall to the right of the zero line, thus indicating an *increase* in error in those two classes. Inasmuch as Table X has been shown to be a more dependable comparison than Table IX, Chart V (made from Table X) will be used as the more authentic representation of persistency. *And the order of the types of error as indicated in the chart will be considered* THE ORDER OF PERSISTENCY. Interpreting the numbers that stand at the right of the chart (by reference to Table I) the order of persistency is found to be that shown in Table XI.

THE ELEMENT OF SPEED IN COMPOSITION

1. *Increase in speed.*—As has already been stated each exercise was limited to fifteen minutes. By comparing, therefore, the totals

Digitized by Google

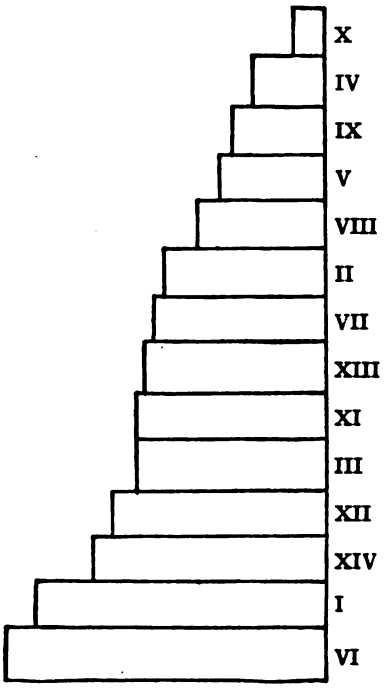


CHART IV.—Showing relative decrease in classes of error. This chart is made from Table IX.

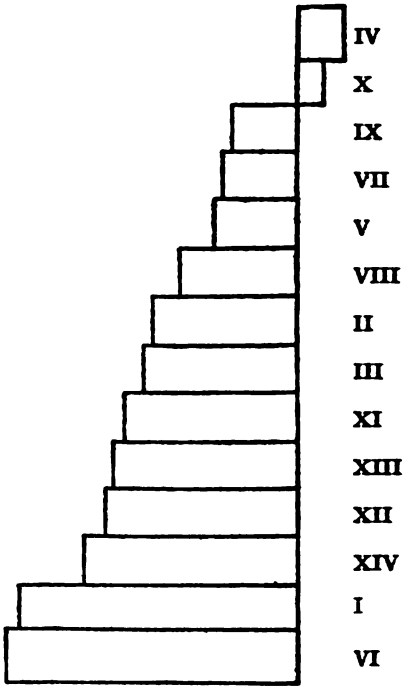


CHART V.—Showing relative decrease (or increase) in classes of error. This chart is made from Table X.

TABLE XI

THE ORDER OF PERSISTENCY

1. Mistakes in the use of adjectives and adverbs.
2. Mistakes in capitalization.
3. Mistakes in the use of the apostrophe.
4. Failure to express clear meaning.
5. Mistakes in the use of prepositions and conjunctions.
6. Mistakes in punctuation.
7. Mistakes in the use of pronouns (not in case).
8. Mistakes in the use of verbs.
9. Careless omission or repetition.
10. Mistakes in the use of quotation marks.
11. Mistakes in spelling.
12. Miscellaneous mistakes.
13. Mistakes in case.
14. Ungrammatical sentence structure.

Digitized by Google

of the number of words written by each group or by comparing the average theme-lengths (as shown in Table XII) we find a 30 per cent increase in composition speed of college Freshmen over high-school Freshmen.

TABLE XII

COMPARATIVE SPEED TABLE

EXERCISE	WORD-TOTALS		AVERAGE THEME-LENGTHS		INCREASE IN SPEED IN PERCENTAGE
	High School	College	High School	College	
1. Narration	19,856	11,004	150	167	11
2. Description	16,111	10,939	121	165	36
3. Explanation	14,404	10,750	109	163	49
Total	50,371	32,693	127	165	30

2. *The type of subject-matter as a factor in composition speed.*—Table XII would indicate that the most difficult form of composition for high-school Freshmen is *explanation* and that the easiest form is *narration*. The two groups are nearly equal in their composition speed in the first exercise. The 11 per cent increase indicated in the last column of the table can probably be accounted for by the more ready muscular co-ordination of the college group in the mechanical processes involved.

Furthermore, the composition speed of the college group is almost the same in the three exercises, while the high-school group shows great variation. The explanation of this fact may lie in the insistence upon exposition and description through the high school; or it may be that greater maturity naturally brings with it the thought-organizing ability necessary to handle readily the two more difficult forms of discourse.

Table XIII is made for the purpose of showing preference in choice of subject and the corresponding theme-lengths for each subject. The greatest variation in the length of themes written on different topics in one exercise is in "A Lucky Mistake," one of the narrative topics. This is probably due to the fact that the topic is an elusive one, containing a kind of paradox, and involving more thinking and more skilful organization than topics which call only for chronological treatment of events. It was the most unpopular title in the list.

Digitized by Google

3. *Relation between speed and accuracy.*—The word *accuracy* in this study is used in the sense of technical correctness and the quality which it indicates is measured by the number of errors per hundred words of composition. The data of the study show a positive correlation between speed and accuracy. That is, stated inversely, there is a negative relationship between speed and error. The conclusion is that, in general, the greater the fluency and ease in composition the greater the freedom from error.

TABLE XIII

TABLE OF THEME-LENGTHS ACCORDING TO TOPICS

TOPIC	NUMBER PUPILS CHOOSING EACH TOPIC		AVERAGE THEME-LENGTH	
	High School	College	High School	College
Missing the Train	71	24	150	171
A Lucky Mistake	12	9	120	148
A Day's Journey	49	33	158	167
Description of a Scene	52	31	136	167
Busy Hour in a Department Store	37	19	134	172
Description of a Person	43	21	112	156
Best Way to Spend a Vacation	72	41	114	164
How to Use a Dictionary	32	12	97	168
Responsibilities of a Freshman	28	8	112	158

Table XIV is the correlation table for the high-school Freshmen, Table XV for the college Freshmen. The composition lengths are divided into class intervals of fifty words. The numbers standing at the left of the tables indicate the number of errors per hundred words.

Computing the coefficient of correlation for each table, we find:

$r = -.177$ (for Table XIV), and
$r = -.277$ (for Table XV).

These negative coefficients tend to bear out the results of other recent tests showing fluency and ease associated with accuracy in achievement.[1]

[1] See W. S. Gray, *Studies of Elementary-School Reading through Standardized Tests* (Supplementary Educational Monographs, No. 1), pp. 131 ff. It is significant that studies of a different ability should point toward the same conclusion regarding rate and quality.

Digitized by Google

This relationship between composition speed and technical correctness may be psychologically explained, in part at least, by

TABLE XIV

CORRELATION TABLE FOR SPEED AND ACCURACY IN COMPOSITION WORK OF HIGH-SCHOOL FRESHMEN

	150	200	250	300	350	400	450	500	550	600	650	700	750	800
12		2												
11					1	1								
10			2		1									
9								1						
8					1									
7				2	3			1						
6		1	2	5	2	2	3							
5			4	6	3	2		2	2					
4	2	2	1	4	3	2	2	1						
3		1	3	4	9	5	5	1						
2			4	4	7	3	3	3	1	1				
1		1	2	1	2	2	3							

TABLE XV

CORRELATION TABLE OF SPEED AND ACCURACY IN COMPOSITION WORK OF COLLEGE FRESHMEN

	200	250	300	350	400	450	500	550	600	650	700	750
7				1								
6						1						
5				1	1	1						
4				4	1	1		1		1	1	
3				4	2	3	3	1	1			1
2			3	1	3	5	3	1	4			
1			1	1	2	1	4	4	2			2

the *habit-nature* of the errors. They are for the most part fixed habits, and their appearance in the written work of the pupil does

Digitized by Google

not, therefore, depend upon the quickness or the slowness of the reaction. Furthermore, an organizing mind is not a careless mind. Hence a person who is able to organize quickly the materials of his composition and thus economize his time is very probably *not* the person who will be guilty of errors of carelessness in the details of the writing. At all events the facts of the foregoing correlation tables very clearly demonstrate that speed in English composition is not incompatible with a high degree of mechanical accuracy and technical correctness in English composition.

CONCLUSIONS

1. *Order of needed increase in emphasis.*—At first thought it might seem that the order of persistency of errors, as shown in Table XI, would determine the order of needed increase in emphasis in the high-school composition course. But a further interpretation of Table XI will be necessary in order to understand its significance. The table simply shows the *relative order* of persistency; it indicates nothing as to the *relative amount* of each kind of error. For example, misspelling ranks eleventh in persistency, but it constitutes over 25 per cent of all mistakes made by the college pupils; and Class IV (mistakes in the use of adjectives and adverbs), ranking first in persistency, constitutes only $3\frac{1}{2}$ per cent of all college error. It would certainly be unwise to spend a great amount of time in a composition course upon an error that occurs very infrequently, and neglect one that occurs seven times as often, simply because the latter error has shown a greater percentage of decrease than the former. Hence, to determine the order of needed increase in emphasis, it is necessary to adjust a balance between the ranks of error according to persistency and the ranks according to prevalence (in the college group).

Table XVI is a repetition of Table XI with the addition of (*a*) a column showing ranks according to prevalence in college papers, (*b*) a column showing difference in ranks, and (*c*) a column showing sum of ranks.

The very noticeable difference in ranks (averaging 3.8) shows the necessity of taking into account both persistency and prevalence in determining the *order of needed increase* in emphasis. This may

Digitized by Google

be done by making a *third* ranking from the *sums of the ranks* of each class of error in persistency and prevalence, as indicated in the last column of the table. This new ranking is found in Table XVII. It expresses the conclusion growing out of this study as to the relative need of increased emphasis upon the different types of technical error in English composition. Inasmuch as the study is based upon data gathered in Kansas City, the conclusion arrived at will be particularly applicable to the high-school English courses of that city. Any generalization should be preceded by other similar studies based upon materials gathered from pupils of different cities.

TABLE XVI

COMPARATIVE TABLE OF RANKS IN PREVALENCE AND PERSISTENCY SHOWING DIFFERENCE AND SUM OF RANKS OF EACH CLASS OF ERROR

Classes of Error	Rank in Persistency	Rank in Prevalence	Difference in Rank	Sum of Ranks
Mistakes in case	13	14	1	27
Misuse of pronouns (not case)	7	6	1	13
Misuse of verbs	8	7	1	15
Adjectives and adverbs	1	9	8	10
Prepositions and conjunctions	5	10	5	15
Ungrammatical sentence structure	14	8	6	22
Lack of clearness	4	12	8	16
Mistakes in punctuation	6	3	3	9
Misuse of apostrophe	3	5	2	8
Mistakes in capitalization	2	2	0	4
Omission and repetition	9	4	5	13
Misspelling	11	1	10	12
Quotation marks	10	13	3	23
Miscellaneous	12	11	1	23

2. *Need of drill in the mechanics of writing.*—One of the most significant facts of the study is the relationship that was found to exist between speed and accuracy in writing. It tends to resolve the problem of English composition into one of habit building, the transforming of textbook knowledge of correct expression into habits of correct expression. That the pupil does not stop to "think his way into correctness" is shown by the fact that accuracy rather than error tends to accompany speed. The condition, therefore, is one that calls for *drill in the mechanics of writing*. But the fact

Digitized by Google

that there is a reduction of only 38 per cent in the total amount of error during the four years of high school would indicate *a general lack of emphasis* upon the technical phases of English. There is a tendency, apparently, to make the composition course a kaleidoscopic view of "things in general" coming round to the fundamentals of composition about once a week. To learn to be *exact* in writing is of much greater importance to the high-school Fresh-

TABLE XVII

ORDER OF SUGGESTED INCREASE IN EMPHASIS ON THE CLASSES OF ERROR*

1. Mistakes in capitalization.
2. Mistakes in the use of the apostrophe.
3. Mistakes in punctuation.
4. Mistakes in the use of adjectives and adverbs.
5. Mistakes in spelling.
6. Mistakes in pronouns, *not including case.*
   Careless omission and repetition.†
7. Mistakes in the use of verbs.
   Mistakes in the use of prepositions and conjunctions.†
8. Sentence meaning not clear.
9. Sentence structure ungrammatical.
10. Mistakes in the use of quotation marks.
11. Mistakes in the *case* of pronouns.

* The miscellaneous group of errors is not included in this table.

† An equality of emphasis is indicated by ranking two classes of error together.

man than to learn to be versatile. There is, after all, a great deal of educational value in the maxim of John Ruskin: the entire difference between education and non-education is a matter of accuracy. This advocated drill in the mechanics of writing may not, of course, develop a *general habit.* Psychologists are still in dispute over this question. But it will be, at least, a great step toward the formation of desirable habits in the field of English.

In connection with this matter of technical accuracy an interesting point (irrelevant in the main body of this study, but pertinent here) is the rather close relationship that was found to exist between final grade and initial error. When the English composition course contains, as it usually does, a great variety of material, such

Digitized by Google

as outside reading, oral reports, memory work, the reading of classics, the study of a textbook, etc., in addition to the actual training and practice in writing, it would not be expected that a pupil's grade would be intended to indicate special ability or the lack of it in the manipulation of any *one* branch of the subject-matter. The grade would be more likely to represent in the teacher's consciousness a *general* or *average* ability in *all*. But, as a matter of fact, the grades given at the end of the term approximate very closely the standing of the pupils in these sets of exercises written near the beginning of school (each pupil's relative amount of error being used as a basis for ranking). This serves merely to bear out the implication of the preceding paragraph that accuracy is an *index* to general ability.

One of the very significant facts brought out in the course of this study is that in different themes on different subjects the same group of pupils will produce the same types of errors in relatively the same amounts. This relative constancy of error-types indicates a "vocabulary of error" corresponding to the "vocabulary of words" which the pupils employ in written expression. At every turn of the investigation we face the fact that English error is not a variable, inconstant thing, as those who temperamentally rebel against the standardization of composition work often tell us, but that it is a very constant, tangible thing capable of scientific treatment and study. It shows itself subject to the laws of habit rather than to the laws of chance in its recurrence; and the only possible conclusion is that our general, abstract instruction in English composition must be accompanied by strenuous applications of *concrete, definite* drill—not haphazard practice. Fight old habit with new habit through the medium of drill—mechanical drill in the mechanics of writing.

3. *Points of greatest efficiency in the present course.*—One of the most gratifying facts established by the study is the noticeably large decrease in ungrammatical sentence structure, mistakes in the case of pronouns, and misspelling. The number of mistakes in the case of pronouns was not very large in either group; hence the decrease is not so significant as the percentage of elimination in spelling errors or ungrammatical sentence structure, the presence

Digitized by Google

of which was very marked—especially in the writing of the high-school Freshmen.

Another important indication of progress is the increased ability shown by the college Freshmen in handling the more difficult forms of discourse—description and exposition. As has already been explained, however, this ability, as well as the ability to construct sentences correctly, may be dependent somewhat upon the natural maturity in thought-power. Hence the increase is probably not to be attributed entirely to emphasis upon these points in class.

4. *Concluding summary.*—Although the study demonstrates the ability of the Freshmen of the Kansas City Junior College to handle with increased fluency the more difficult forms of discourse and shows in some instances a high degree of elimination of error, *it indicates a general lack of emphasis* upon the *mechanics of English composition* in the Kansas City high schools; and by discovering the ranks, in persistency and prevalence, of the major classes of error, it has been able to establish the *order of needed increase in emphasis upon these classes.*

The chief value of the study lies in this last point: *establishing a scientific basis for the direction of effort.* Mere opinion as to the content of a composition course is unreliable, unless that opinion is founded upon some accurate knowledge of the facts. Such knowledge grows out of scientific investigation. It means for teachers, economy of time and effort; and for those under their instruction, increased educational value.

Digitized by Google

SOCIALIZED ENGLISH

ZELMA E. CLARK
The University of Chicago High School

There is a loud cry today for education in citizenship. To many this means merely knowledge of government—city, county, state, country. To me it means much more—the learning to live with a fulness and appreciation in co-operation with others that casts out selfishness and greed. This means an education in correct values—the value of knowledge, beauty, personality, ideas, material things. It means a learning to understand how to supply the inherent wants of man for health, wealth, knowledge, beauty, companionship, rightness of living, with a fairness to one's self and to others. Such an interpretation of citizenship requires the attitude of mind that we are citizens already, not simply preparing for a future citizenship, and that we are learning to live by living.

In the average high-school work too little of the power and knowledge which the student has already gained in his earlier years is recognized and utilized. Too little is made of his natural interests; indeed there is, also, too often no attempt on the part of the educators even to find these natural interests and to lead the student on to kindred ones until his horizon of life is broadened.

We get our ideas and ideals of living from observation, from conversation, and from reading. I am especially concerned with the problem of reading, for while a student's companions help him to observe and to express his ideas, reading is so individual and solitary a matter that he needs special help in recognizing the quiet pleasure of his own thoughts and his book. How vital is the matter of reading, Mr. Kerfoot, the literary critic of *Life* emphasizes in his statement, "Reading is a form of living—because of the things that happen in us when we read." Now what things do happen? Spencer says that "life is the continuous adjustment of internal relations to external relations," and a later scientist says that "we know life only as a quality of, and an association with, living

Digitized by Google

matter." Part of this knowledge we acquire by reading, and, psychologically, the copartnership between writer and reader, joined by all the previous experiences that we have had, creates new ideas in our emotional and spiritual natures. With the stimuli of the printed page we develop out of our own mental possessions entirely new combinations of ideas. Then we should read widely, and as we are led to reading through our natural interests, we shall find these interests branching out into other interests, or rather shall draw into the mind perceptions that in turn call for specialized attention, and thus our knowledge of life will be broadened. For this reason, whether we wish our reading to serve as fun and relaxation or as a way of acquiring knowledge, we must develop the reading habit; for no person should miss this great life-adventure. The chief aim of the following course is to develop this habit. Let the student's reading follow the line of his own interests, and then be wisely guided, but not forced, to writings of various literary values. Then, I think, there will be no stagnation, for the student will be discovering truths in his own chief interests.

It is in consideration of the problem of leading students to wide, intelligent reading, and of making that reading vital, that I suggest the following for one semester of a ninth-year English course. Part of it is built upon actual experiment. It assumes an introductory knowledge of the general elements of community life, which are naturally developed in connection with the study of Chicago in the third grade of our elementary school[1] and with ancient, mediaeval, and United States history in the later grades. It aims to summarize this knowledge and to apply it to local conditions as well as to see how large a part of literature is based upon the great fundamental problems of our getting along with our neighbor.

The course requires during the semester about sixteen hundred pages of reading on the part of each student, the material to be chosen from a list of over two hundred books, and the reading to be discussed from time to time. The oral and written material is to be centered about the topics of the outline, and once a week the class is to consider together one book, in order that the members may

[1] *Elementary School Journal*, XVII, Nos. 6, 7, 8, 9.

Digitized by Google

learn how to read, how to observe, and how to estimate values. Not more than two days are to be spent on the discussion of any one book. It is the aim to give material such as students can finish in a short time, thereby developing their feeling of successful accomplishment. Except for this one day a week of general discussion, the class will work in groups of five or six, exchanging opinions, making visits to parks and manufacturing plants, and preparing group reports. For example, in the first topic one group would consider the elemental needs for health, clothing, shelter, food, and after reading in the library would prepare its report as to how our neighborhood is supplied with these needs, and how necessary co-operation is. For the first book read together in class one might well select Helen Keller's *Story of My Life* or *The World I Live In*, to see how one who is handicapped can fit herself into our complex civilization.

Much of the work of the course is to be done, then, as home reading and as supervised study in the classroom. Fifteen minutes of each recitation are set aside for the latter. In that time selected portions from some book on the suggested list pertinent to the subjects under discussion are to be read by the instructor, and notes and comments made by the students. In this time, also, there will be the informal discussion of errors in written work, the correcting of the same, and the making of notes of reading, of material presented in class, and of observations made in occasional visits to various business houses, all notes to be done in card-catalogue form. Plans for the oral themes may also be thought out in this period of supervised study.

The course then will develop:

1. Power and interest in reading purely informational material and that of literary value which appeals to the imagination, ideals, and love of romance of the adolescent.

2. Power in gathering material for themes, and in planning and writing them with clearness and correctness.

3. Power in making oral reports of visits to manufacturing plants and of one's own reading.

4. Power in observing matters in one's own environment, and in understanding one's duty in connection with them.

Digitized by Google

The outline of main topics is, of course, only for the instructor's use. It is intended to be simply suggestive. The students are to develop in a very simple but detailed way the theme topics, and to suggest others similar to those given here. There must be no vagueness or indefiniteness about any part of the work. It all comes very close to each student's experience, and if he only *observes* and *thinks*, he will find much in even so plain a title as, "How We Get Our Potatoes." The books suggested are only a part of a long list of available material.

The first part of the course has to do with the community life of our own neighborhood, and the second with our relation to the great city and the surrounding country. It is not the aim of the course to include everything that belongs to city civics, but rather to give an understanding of the different phases of interests and our own part in them, and to stress the fact that there must be co-operation of citizens, chiefly through the medium of government; for, after all, government is the means in our hands of providing for ourselves all these needs which we must have if we would live with the true joy of living.

A. Our Connection with Our Own Neighborhood

I. Myself
- 1. My needs
  - *a*) Food
    - (1) Where we get our milk, eggs, vegetables, meat, bread
  - *b*) Drink
    - (1) Water supply
  - *c*) Shelter
  - *d*) Clothing
- 2. My wants
  - *a*) Knowledge
    - (1) Science, appreciation of art, travel, literature, language
  - *b*) Companionship
    - (1) Good friends, how to get them, and how to keep them
- 3. My standards of living
  - *a*) How different from uncivilized races
  - *b*) Sincere or artificial
- 4. My methods of thinking and working
  - *a*) How I read
  - *b*) How much I observe and draw conclusions
  - *c*) How I study (see "Study Helps," *School Review*, May, 1916)

Digitized by Google

5. My ideas of efficiency
   a) Aims of Boy Scouts
   b) Aims of Camp Fire Girls
   c) What I want to be physically, mentally, and morally

Suggested reading for students:

Dunn, *Community and the Citizen*, chap. iv.
Gulick, *The Efficient Life.*
Eliot, *Training for an Effective Life.*
Crane, *Adventures in Common Sense.*
Edwards, *The Common Road.*
Huxley, *Autobiography.*
Eliot, *Silas Marner.*
Ruskin, *Sesame and Lilies.*
Burroughs, *Style and the Man.*
Franklin, *Autobiography.*
Keller, *Story of My Life.*
Muir, *Boyhood of a Naturalist.*
Blackwood, *Education of Uncle Paul.*
Pendered, *Book of Common Joys.*

Suggested topics for theme work:

What I Want to Do with My Life
My Hobby
The Study Help that Means Most to Me
What I Like about the Boy Scouts
What I Like about the Camp Fire Girls
Where Our Family Gets Potatoes
Water Street
A Central Market I Have Seen

II. The House I Live In

1. The building
   a) Form, material, rooms, arrangement
2. Sanitation
   a) Cleanliness, ventilation, heat, lighting
3. Furnishings
   a) For comfort, for attractiveness
4. Conveniences
   a) Electricity, gas, telephone
5. Surroundings
   a) Lawn, gardens, flowers
6. Pleasures
   a) Works of art: rugs, pictures, lamps, statues
7. Books
8. Social life
   a) My duties

Digitized by Google

Suggested reading for students:

Dunn, *Community and the Citizen*, chaps. vi, viii.
Henderson, *Social Spirit in America. Home Making as a Social Art*, chap. ii.
Robertson and O'Donnell, *The Healthful House.*
Kimerly, *How to Know Period Styles in Furniture.*
Putnam, *Plumbing and Household Sanitation.*
Grahame, *Golden Age.*
Dickens, *Cricket on the Hearth.*
Tryon, *Speaking of Home* (for girls).
Kilmer, *Roofs.*
Foss, *House by the Side of the Road.*
Burns, *Cotter's Saturday Night.*
Whittier, *Snowbound.*

Suggested topics for theme work:

Doorways
Uses of Concrete in Building
My Study Table
How to Wire a House for Electricity
The Attractiveness of a Comfortable Living-Room
What I Like about My Home
A Charming Hostess
A Visit to the Telephone Company
Good Books I Own

III. The Street on Which I Live

1. Evolution of roads
   a) Indian trail, pike, street, boulevard
2. My street
   a) Its underground pipes, paving, lighting, drainage
3. How to be kept in condition
   a) Governmental care
   b) Personal care
4. Use of street for transportation, communication
5. Famous roads and streets in the world
6. Joy of the road (an attempt to broaden students' interests in walking and in observation of nature)

Suggested reading for students:

Merwin, *Road Builders.*
Fairless, *The Roadmender.*
Grayson, *Adventures in Contentment.*
Hudson, *Hampshire Days.*
W. R. B., *Joys of the Road* (containing selections from Hazlitt, Stevenson, Whitman, Burroughs).

Digitized by Google

Mills, *Story of a Thousand-Year Pine.*
Peabody, *The House and the Road.*
Lindsay, *On the Building of Springfield.*
Burroughs, *The Wit of a Duck.*
Mayne, *Turn of the Road* (a play).

Suggested topics for theme work:
What I Like about My Street
How to Improve the Appearance of My Street
History of State Street
The Longest Street in Our City
The Laying of Water Mains
Fashions in Street Lamps
The Best Kind of Shade Trees
Tramps and Rules of the Road
Country Roads That I Know
Automobile Rules
The Gypsy Life

IV. My Neighbors
1. Who is my neighbor?
   a) The man next door, the immigrant, the negro
2. My duty to my neighbor
   a) In getting his point of view
   b) In respecting his rights
3. Co-operation with my neighbor
   a) In development of similar standards
   b) In mutual aid for civic betterment

Suggested reading for students:
Gale, *Neighbors* (a play).
Richmond, *Good Neighbor in the Modern City.*
Addams, *Twenty Years at Hull-House.*
Daskam, *Madness of Philip.*
Tarkington, *Penrod.*
———, *Seventeen.*
Steiner, *Against the Current.*
Antin, *The Promised Land.*
Grayson, *Adventures in Friendship.*
Vaka, *Child of the Orient.*
Washington, *Up from Slavery.*
Curtis, *Prue and I.*
Eastman, *Soul of an Indian.*
Howells, *Doorstep Acquaintance.*
Bible, Cain and Abel.
———, Good Samaritan.

Digitized by Google

Suggested topics for theme work:
What People Are Interesting to Me
How Other People Are Like Me
Does the Immigrant Have a Fair Chance?
How Shall We Help the Negro?
A Visit to Hull-House
Back of the Yards

V. The Beauty of Our Neighborhood
1. Appearance of our own homes
a) Cleanliness, lawns, flowers
2. Attractiveness of the streets and boulevards
3. Parks
a) Natural beauty, statues, bridges, buildings
4. Our University
a) Campus, buildings
5. Our part of the Lake Shore

Suggested reading for students:
Henderson, *Social Spirit in America*, chap. xiv.
Robinson, *Modern City Art.*
Howe, *Modern City and Its Problems.*
Dunn, *The Community and the Citizen*, chap. xvi.
Walker, *Chicago Beautiful.*

Suggested topics for theme work:
The Vistas in Jackson Park
The Municipal Christmas Tree
Signboards
Our University Buildings
The Wooded Island
Mr. Taft's Plan for the Midway
Ida Noyes Hall

VI. How I May Learn to Live Rightly
1. Recreation
a) Opportunities for physical development—gymnasiums, swimming-pools, lake shore, athletic fields, parks
b) Theaters, cinematograph, museums, art galleries
2. Means of education
a) Schools, Y.M.C.A., libraries
3. Church affiliations

Suggested reading for students:
Dunn, *Community and the Citizen*, chap. xv.
Dewey, *The School and Society.*
Henderson, *Social Spirit in America*, chap. xii.

Digitized by Google

Suggested topics for theme work:

What I Gain from School Outside of Class
A Visit to a Municipal Playground
What Kind of Music I Like
How I Spend My Leisure
The Form of Athletics That I Enjoy Most
The Magazines I Read
Our School Library

VII. Our Own Community Control

1. Home government
   a) Rules of the household that form our habits
2. School government
   a) Administrative control
   b) Student government
3. Local government
   a) Wards, election precincts, election commissioners
   b) Duties of the alderman
4. How young people can influence elections
5. Reports of special departments of city work
   a) Park boards
   b) Welfare

Suggested reading for students:

Taft, *Four Aspects of Civic Duty.*
Goodnow, *City Government in the United States*, "Municipal Problems."
Dunn, *Community and the Citizen*, chap. xxii.

Suggested topics for theme work:

What I Can Do to Help My Neighborhood
The Duties of Our Alderman
South-Side Improvement Association
Work of the South Park Commissioners
Procedure of Getting a Street Paved
Controlling the Smoke Nuisance

B. Our Relation to the Great City Life

I. Location and History of Chicago

1. Geography of early days
   a) Original shore line, river, dunes
2. Physiography
   a) Plain, ridges, marshes, trails
3. History of the growth of the city
4. General divisions of the city
   a) Natural, business, residential
5. General plan of the city

Digitized by Google

Suggested reading for students:

Hall, *Story of Chicago.*
Salisbury and Alden, *Chicago and Its Environs.*
Chapin, *In and about Chicago.*
Kinzie, *Waubun.*
Barton, *Prairie Schooner.*
Parkman, *Oregon Trail.*
Chicago Record Herald, March, 1913, "Around the World in Eighty Blocks."
Charters of the City of Chicago.
Civic Manual of Chicago and Cook County.

Suggested topics for theme work:

Value of the Great Lakes in the Development of the City
Early Explorers
Old Indian Trails
Old Coach Roads
"Made Land" in Chicago
The Chicago Plain
Why Chicago Is a Greater City than Duluth
Explain Our Morning and Evening Fog

II. TRANSPORTATION

1. Early roads, coach roads, main streets
2. Street railways
3. Elevated roads
4. Loop
5. Tunnel
6. Terminals of trunk lines of railroads
7. Lake and river

Suggested reading for students:

Warman, *Story of the Railroad.*
Pyle, *Life of James J. Hill.*
Parkman, *Oregon Trail.*
Dickens, *American Notes.*
"Chicago Freight Subways," *Harper's Weekly*, XLIX.
"Freight Tunnels of Chicago," *Independent*, 1904.
"Lighting System of Chicago," *Electrical Review*, 1902.
Reports on Dock and Pier Development.

Suggested topics for theme work:

The First Railroad West of Chicago
History of the Illinois Central Railroad
Visit to the Tunnel
Northwestern Station
Belt Line

Digitized by Google

Can We Have a Central Station?
How to See Chicago
Traffic System of Chicago
Chicago, the Greatest Railroad Center in the United States
Names of Streets

III. INDUSTRIES AND PRODUCTS OF OUR CITY

1. Kinds
2. Sources of material used
3. Kinds and supply of labor
4. Means of getting workers
   a) Labor unions
   b) Employment agencies
5. Control of light and power

Suggested reading for students:

Price, *The Land We Live In.*
Cooke, World at Work Series:
A Day in an Iron Works.
A Day with Leather Workers.
Williams, *How It Is Made.*
Bassett, *Story of Lumber.*
Knox, *All about Engineering.*
Iles, *Leading American Inventors.*
Morgan, *Boy Electrician.*

Suggested topics for theme work:

Moving-Picture Industry
Why Are All the Large Mail-Order Houses Located in Chicago?
Why Are the Steel Mills at Gary and South Chicago?
Compare the Sky Line of Chicago from the Lake with That of New York from the Harbor
Visits to Different Plants

IV. DEPENDENCE UPON THE COUNTRY

1. For food
2. For pleasure
3. For trade

Suggested reading for students:

Muir, *Our National Parks.*
Sharp, *Fall of the Year.*
Bennett, *Your United States.*
Mills, *Wild Life in the Rockies.*
White, *Blazed Trail.*

Digitized by Google

Suggested topics for theme work:

Truck Gardens
Why Has Chicago the Greatest Stock Yards in the World?
Where I Spend My Vacation
Where We Get Our Milk Supply
Dr. Monilaw's Camp

V. Use of the Lake Shore

1. For trade
   a) Piers, docks, warehouses
2. For safety of travelers
   a) Lighthouses, life-saving stations
3. For pleasure
   a) Yacht club, municipal pier, bathing beaches

Suggested reading for students:

Smith, *Tom Grogan.*
———, *Caleb West.*
Chicago Reports.

Suggested topics for theme work:

Jackson Park Harbor
A Life-Saving Station
How Are Pier Foundations Laid in Water?
Municipal Pier
Our Lighthouses
The Drives along the Lake Shore
Parks along the Lake Shore
Bathing Beaches
Chicago as a Summer Resort
La Rabida Convent

VI. Care of the Unfortunate

1. Settlement work
2. Public institutions
3. Private institutions
4. Associated charities
5. Child welfare

Suggested reading for students:

Dunn, *Community and the Citizen*, chap. xviii.
Report of Child Welfare Work.
Report of Woman's City Club.
Reports of Chamber of Commerce.

Digitized by Google

Suggested topics for theme work:

How to Raise Money for the Poor
How to Talk to the Deaf
Our Hospitals for the Sick
Care of the Orphans
Homes for the Aged

VII. OUR PROTECTION

1. Against sickness
2. Against fire
3. Against lawbreakers
4. Against accidents

Suggested reading for students:

Dunn, *Community and the Citizen*, chaps. ix, x, xviii.
Reports of Fire Department.
Reports of Police Department.
Reports of Health Commissioner.

Suggested topics for theme work:

Fighting Fire in Chicago
John Worthy School
Juvenile Court
Evolution of the Fire-Engine

VIII. CIVIC BEAUTY OF CHICAGO

1. Architecture
   a) Residences, business blocks, public buildings, churches
2. Bridges
3. Statues and buildings in the parks
4. Boulevards and streets
5. Chicago Beautiful

Suggested reading for students:

Dunn, *Community and the Citizen*, chap. xvi.
Reports of City Architect.
Walker, *Chicago Beautiful.*

Suggested topics for theme work:

Visit to the Art Institute
Our Bank Buildings
The Buildings along Michigan Boulevard
The Cathedral in South Chicago
Plans for Chicago Beautiful

Digitized by Google

IX. Our City Government

1. Development of Our Government Charters
2. Legislative Department
   a) City Council; how elected
3. Executive Department
   a) Mayor; administrative departments
4. Judicial Department
   a) Municipal and police courts

Suggested reading for students:

Unification of Local Governments in Chicago, Chicago Bureau of Efficiency, 1917.
Nineteen Local Governments in Chicago, 1913.
Gaston, *History and Government of Chicago.*
———, *Taxation in Chicago.*
———, *Legislative and Executive Powers.*
Reports of Department of Finance.
Reports of Department of Buildings.
Marriott, *Uncle Sam's Business.*
Wilcox, *The American City.*
Dunn, *Community and the Citizen*, chaps. xix, xx.

Suggested topics for theme work:

Artificiality of Our City
If I Were Mayor
How to Bring Suit for Injury
Our City Council

Digitized by Google

EDUCATIONAL NEWS AND EDITORIAL COMMENT

Journal of School Hygiene

The *School Review* is glad to welcome a new educational journal devoted exclusively to the science of school hygiene. The newcomer is now well started in its first year. Seven numbers have appeared of the *American Journal of School Hygiene*, published monthly, except July and August, in Worcester, Massachusetts. Lawrence Augustus Averill, professor of school hygiene in Massachusetts State Normal School, assisted by a staff of able contributors, is the editor. These men have undertaken a task in which others before them have failed because of lack of support. It is to be hoped that the educational interests of the United States will make the new venture a success, rivaling in excellence the English publication, *School Hygiene, a Review for Educationists and Doctors*, now in its eighth volume.

The Super-Superintendents of Chicago Schools

Amusing, if they were not pathetic, are some of the antics performed by the Chicago Board of Education. A fair sample of the unintelligent way in which school affairs are being managed is the recent action of the Board appointing what has been called a committee of "super-superintendents of educational employment." Three members of the board are empowered to scrutinize all appointments, not under the civil service, made by Superintendent Shoop. The superintendent, endeavoring to reconstruct his administration, has immediate occasion to appoint several educational experts as supervising principals. Upon this central force, perhaps more than upon any other factor, depends the general instructional efficiency of the school system. Yet the "solid majority [Thompson clique] of the board" proposes to keep its hands on all such appointments. The situation is exactly similar to what would occur if the directors of a huge business enterprise should attempt to control the appointing power of an executive officer. Not for one day would a capable official tolerate such interference in business. Unfortunately even the best school executives are often compelled to compromise with

Digitized by Google

their pride. If they did not a city like Chicago might never be able to keep a good superintendent more than a fortnight.

Incidentally an effort is being made by the inside majority to fasten one set of elementary texts on the schools for a period of five years. In addition the "insiders" propose to make one man, chairman of a special committee on textbooks, responsible for fixing prices. This in spite of the fact that the choice of texts is distinctly an educational matter, which ought no more to be decided by a board of trustees than the selection of various kinds of tools ought to be left to the trustees of a manufacturing concern.

If the city of Chicago has an executive school officer whom she can trust, let her trust him; if not, let her hire a new official. If the city of Chicago has a school board which apparently cannot or will not trust a good executive, let her get a new school board. This sounds like simple common sense and decent business management. But unfortunately the city has not the power of recall. They tell us that the recall has abuses. Can these abuses be any worse than the state of affairs in a city which is finally awake to a gross error on the part of her electorate, but is powerless until the time for a new election?

Schools and the War

In many different ways schools are conscientiously endeavoring to assume their share of responsibility in the war crisis. National leaders of education are vigorously insisting that at the present time enrolment in schools of all grades is both a national duty and a personal advantage. Such enrolment is a personal advantage because, if the war is protracted, the next few years may see a great dearth of men equipped for important professional duties. School attendance is a national duty for the same reason: the work of the nation must go on under trained leaders. These two notes, struck first by the National Commissioner of Education, are repeated in every corner of the land.

But the schools are not content merely to lead pupils to look into the distant future. They are also endeavoring to teach them that all true Americans young and old have grave obligations in the immediate emergency. No data are available to indicate the very large number of high-school boys who have spent all or part of the summer vacation on the farm. City boys who last spring did not know the difference between a hay loader and a pitchfork have played their modest part in the national campaign for food. Of one group of forty boys from an aris-

Digitized by Google

tocratic neighborhood in Chicago, some of them sons of millionaires, only three or four failed to hold out, and two of these for good reasons. From the Newark, New Jersey, high school ninety boys went to work last spring on farms; of these fewer than ten gave up their labor. The general majority, with health, happiness, and a sense of responsibility, accepted and have completed their stint. The public press is filled with instances similar to these from Chicago and Newark. The good thus attained in producing food, decidedly worth while in itself, has been overshadowed perhaps, by an incalculable gain in moral fiber that has come to the lads themselves.

While boys are being taught their opportunities and obligations as food producers, the duties of girls as food conservers are not being neglected. Never before have the signs pointed toward such extensive endeavors to develop domestic science in the high schools. In Minneapolis, for instance, food-conservation classes have been crowded all summer in four high schools and seven grade schools. This work, together with classes in cookery, will be continued in the fall. Various cities in Indiana are installing special teachers for food conservation and classes in making Red Cross garments and other supplies. Detroit is planning for record-breaking attendance in her night-school classes in first-aid instruction, in economy cooking, sewing, dress conservation, and lectures on food. And the cases just cited seem to be typical of what is being done all over the country.

The Red Cross Appeal

Henry P. Davidson, chairman of the American Red Cross War Council, on September 1 sent to the press a preliminary statement of the work of that organization in Europe. During the past year $13,000,000 has been expended, most of it in France, and many thousands of workers have been employed. The world calamity gives to the Red Cross an opportunity to express the best and most characteristic side of American life, and to do it on a scale called for by the immensity of the sorrow and distress of mankind. Recently the American people contributed $100,000,000 for the work; membership in the organization in the United States now numbers 3,621,000, over 1,000,000 names having been added in the last month; 2,400 chapters are active in various sections of the country.

But the magnitude of the work accomplished and the generous gifts of recent months must not blind us to the fact that the fields for funds

Digitized by Google

and service are unlimited. The number of chapters and workers ought to be tripled during 1918. No better field of national usefulness has been opened up to the teachers of the country than the fostering of just this work. Every high-school girl in the land ought to have the opportunity of feeling that she is of direct and vital assistance in the great duty of saving and of rebuilding. Let a committee of three women teachers in each high school call a meeting of the girls and propound the needs of the hour. An active Red Cross chapter in every high school should be our aim.

The general lines of service undertaken in France alone have been determined after a careful survey of the situation by the Red Cross Commission. These purposes are outlined by Mr. Davidson as follows:

1. To establish and maintain hospitals for soldiers in the American Army in France;

2. To establish and maintain canteens, rest houses, recreation huts, and other means of supplying the American soldiers with such comforts and recreation as the Army authorities may approve;

3. To establish and maintain in France canteens, rest houses, recreation huts, and other means of supplying comforts and recreation for the soldiers in the armies of our allies;

4. To distribute hospital equipment and supplies of all kinds to military hospitals for soldiers of the American or allied armies

5. To engage in civilian relief, including:

a) The care and education of destitute children

b) Care of mutilated soldiers

c) Care of sick and disabled soldiers

d) Relief work in the devastated areas of France and Belgium, such as furnishing to inhabitants of these districts agricultural implements, household goods, foods, clothing, and such temporary shelter as will enable them to return to their homes

e) To provide relief for and guard against the increase of tuberculosis

6. To furnish relief for soldiers and civilians held as prisoners by the enemy, and to give assistance to such civilians as are returned to France from time to time from the parts of Belgium and of France held by the enemy;

7. To supply financial assistance to committees, societies, or individuals allied with the American Red Cross and carrying on relief work in Europe

---

THE GERMAN LANGUAGE

Both sense and nonsense have characterized various attacks upon the German language in the schools. If the President of the United States is right, we are not warring against the German people, we are

Digitized by Google

not warring against their unrivaled progress in science or their admirable achievements in art and literature, all the riches of which are, of course, embodied in the German language. Our warfare is against a vicious, brutal, and ruthless leadership which is exploiting the genius of the German nation in an endeavor to control the destinies of the world. When that militaristic ambition is finally crushed, the civilized world must welcome back Germany and the German language. In the meantime to withdraw our interests from the language of research and of criticism, to withdraw our attention from the tongue of Luther, Gutenberg, Goethe, Kant, Schiller, and Beethoven, is the height of pettiness. It manifests a lack of humor which the Germans themselves refuse to show. To them Shakspere is a world-figure, not an Englishman. In short, if the study of German is to be abandoned, it must be for educational or for social reasons, and not because of animosities arising out of the war.

On the other hand, there are at least two social considerations which naturally force themselves to the front in these days. Never before has the conviction been so prevalent that the United States has, as a primary problem, the welding together of a heterogeneous mass of widely differing elements. The imperative necessity of English as the national tongue does lend strength to the argument of those who maintain that our present system of language instruction is absurd. For instance, one of the Middle Western cities last year spent $100,000 in teaching English-speaking children German and almost as much more in teaching English-speaking children French, while the same city spent only $700 in teaching English to foreign-born residents. The foreign language instruction was expended, too, on a comparatively small number of children. Of course, it may be replied that the children of the foreign-born are being taught English, and that not very many adults can afford the time and strength for evening schools. However, it does seem somewhat absurd for a city to refuse English instruction to any adult in the community on the ground of expense, and at the same time be teaching French and German in the elementary schools. It does seem common sense to affirm that, if the issue is between appropriations to teach 100 adults English or 100 grade children French or German, the expenditure ought to be decided in favor of the national language.

There is even less room for doubt concerning a second social consideration. If the retention of a foreign language in American schools tends either directly or indirectly to foster ideas and ideals which are

Digitized by Google

antagonistic to those of the nation, such instruction ought to be excluded by state or federal law. Difficult though it may be, our citizens of German extraction are compelled to choose; Germany and the United States are at war. American citizens cannot be loyal to both. As conservative a paper as the *Springfield Republican* points out the menace to America of loyalty to a foreign country, fostered by a retention of Old World customs, ideals, and language.

> The past few years have revealed in this country centers of Teutonic feeling which have been more susceptible to German than to American thoughts and influences. These alien groups would not in themselves be alarming if the German government had not undertaken to make use of them as political agencies for its own ends. Otherwise the German community in the United States would not be regarded with more suspicion than any Scandinavian or Polish community which was somewhat slow in adopting the language and political institutions of the new country which it had selected to make its home. The melting-pot has problems that are not to be solved in a day, and patience and mutual toleration are the course of wisdom. But where assimilation has been retarded by political agents of another nation, who have so played upon natural sentiments that loyalty to the native land has not gradually been superseded by loyalty to the adopted country, the school authorities are derelict in their obligation to the state if they do not see that Americanizing influences are predominant in the school.

Drafting Medical Students

The *Journal of the American Medical Association* has made a careful study of the effect the draft promises to have upon our supply of physicians and surgeons. The *Journal* points out what utter folly it will be for the United States to repeat the error of France and England in sending a large proportion of their medical students to the trenches. In both countries civil hospitals at once felt the lack of adequate interne service, and the supply of army surgeons for the later years of the war has been seriously diminished. Unless our War Department very soon renders a definite decision to the effect that medical students can serve best by completing their course, we shall repeat the mistake of France and England. The *Journal* communicated with the 13,764 medical students enrolled last year. Of these, 5,909 have already replied to the questionnaire; 5,053 have been drafted, 29 per cent in the first call, 19 per cent in the second, and 51 per cent in later calls. The medical schools will be seriously depleted.

To be remembered also is the fact that many young men are also called to the colors who in normal times would enrol in the Freshman

Digitized by Google

class. A man is a man whether he be scholar, poet, musician, or mechanic. But in war time a man is more than a man if he be a physician or surgeon, or on the road to becoming one.[1]

National Child Labor Law on Trial

The Federal Child Labor law, establishing fourteen years as the minimum under which a child may be employed, went into effect on September 1. The working day of no child under sixteen shall exceed eight hours, and he may not be employed between 7:00 P.M. and 6:00 A.M. These provisions are to be enforced by excluding from interstate commerce the products of any factory, mill, workshop, or cannery which violates them.

Already the law has been held unconstitutional by a federal court of North Carolina. The trial case was brought in the name of one Dagenhart, a poverty-stricken mill hand, claiming a legal right to the earning power of two sons. The federal judge held the law unconstitutional on exactly that principle, namely, the property right of a parent in the services of his minor children. In other words, the statute deprives a citizen of property without due process of law. One additional point was made by the court to the effect that the law is an attempt by Congress to control manufacture within the states by the use of its power over interstate commerce, thus attempting to do indirectly what it cannot do directly.

Appeal will be taken to the Supreme Court, and in the meantime the law goes into effect everywhere except in the federal district in which the decision of the lower court holds temporarily. Government attorneys do not fear the second principle enunciated by the judge, because they feel that identically this issue has been settled in the lottery cases and in the Mann White Slave law, both of which have been held constitutional. The other issue is more serious and points, not only at a technical legal consideration, but also directly at the social issue involved: to what extent can society afford to allow its children to become wholly or in part the support of indigent parents? It may be remarked parenthetically that the brilliant array of legal talent supporting the case of the Dagenharts indicates that the Southern Cotton Manufacturers Association is interested in the Federal Child Labor law exactly as the National Manufacturers Association has been interested in the laws of the minimum wage and hours of labor for women. Thus

[1] Since this was written medical students have been temporarily exempted.

Digitized by Google

once more the fight is on between business and life; between what *is* constitutional and what *ought* to be constitutional.

Commissioner Kendall's Call

As an example of the ringing calls to service which school leaders are sending to their subordinates in the ranks, the *School Review* reprints a recent letter of Commissioner Kendall, of New Jersey:

To Teachers and School Officials:

The present is a time which makes new demands upon all men and women. Teachers and school officials are no exception. There is a new urgency. But the processes of education must go on, modified only as conditions demand.

The causes of the war are set forth in the President's Message to Congress. This message is a lofty statement of the American position. Pupils in the high schools and the older elementary pupils should be familiar with it.

No effort should be spared to make our pupils understand why we have entered the war—not for hate, not for conquest, not for military glory—but for human rights, for the common welfare, and for the perpetuation of real democracy.

The later statement of the President—a message to the people pleading for the use of all our energies and for wise economy—is a document which should certainly afford material for discussion for the guidance of old and young alike. The attention of pupils may appropriately be called to the ways in which they can respond by preventing waste in the use of school supplies, by the conservation of food, and by the avoidance of needless expenditures.

Excitement and nervous tension are an accompaniment of war affecting old and young alike. To these our youth are peculiarly susceptible. These are likely to hinder the work of the schools and interfere with customary orderly behavior.

The teacher will not seek to arouse these emotions; he will seek to allay them. This is not easy. Patriotic enthusiasm for the country and its ideals is, however, one of the most beautiful expressions of boys and girls. A little boy once said that he had three fathers—God, his father, and Uncle Sam.

An appreciation of our country, the opportunities it gives, the blessings it confers—these should be taught. Obligation to serve it, our debt to it, our responsibility for it—these, too, should be taught. Nor should this teaching be confined to children. Patriotism is not a negative virtue; it means service; it means self-denial. As such it should be positively taught in schools. Says Emerson: "He is base—and that is the one base thing in the universe—to receive favors and render none."

The loyalty of teachers to the United States should be without suspicion. Teachers are public officials. If they cannot support the government heartily they should resign.

The war presents a unique opportunity to demonstrate the value of the industrial activities of the schools. If these activities are useful now, in the

Digitized by Google

present emergency, their place in public esteem will be further assured. The resources of agricultural activities, of home gardens, of the school kitchen, the sewing room, manual and vocational shops, all should be used for aiding the war so far as circumstances permit. As a force for patriotic service they become vitalized as the men and women in charge make them vital.

Every teacher, however, has a peculiar duty and obligation to the State and to the children at this time. That duty or obligation is to do his work well in the ordinary routine of the school. The value of the schools, even in time of war, is not confined to shops and gardens. To teach a better school than he has ever taught is a patriotic obligation of the teacher. The children we teach are the men and women of ten and twenty years from now. They must be made intellectually strong, morally strong, physically strong, as well as industrially strong. These children will, as men and women, have difficult problems to meet, some of them the outgrowth of this war. On those men and women will rest decisions of vital interest to society. Upon them will fall some of the burden of the cost of the war. That teacher or principal or superintendent who does not feel at this time renewed consecration to his work is to be pitied. The children in all our schools—from the kindergarten through the high school —must be well taught in these times.

Preparedness, then, is the occupation of the teacher as an official of the State. The school is the organized instrument, set up and supported by the public in the confident assurance that teachers will make it an effective instrument of this preparedness. The public will not be disappointed here, for the loyalty and the faithfulness of American teachers will be equal to the trust.

The prevalent interest in the war should be capitalized for instruction. The life, institutions, and resources of our allies, as well as of those countries with which we are at war, offer material for discussion. Our geography may be made more useful. The teacher should use wall maps for class discussion of important events as they occur. Newspapers—daily and weekly—were never more interesting than at present. History is now in the making—not military history alone, but history that is political and economic—and with this our pupils should become acquainted. The significance of the democratic movements abroad in the world should be taught to children of appropriate age. Here is an opportunity to teach a useful kind of civics.

This, too, is a good time to make provision in the high schools for needed instruction in the elements of political and social science, a kind of instruction which should be more common in those schools if our young people are to play their part in government and society usefully and intelligently.

The enactment at the recent session of the Legislature of a law providing for universal physical training in the schools of the State was exceedingly opportune. Two and a half hours a week are to be used for this purpose, beginning with the new school year next September. A course of study or of exercises is now being prepared and will be ready at that time.

This is essentially a health measure—a preparedness measure. If the course is well planned and well taught it will do much to make the future men

Digitized by Google

and women of New Jersey physically strong and healthy. It ought to be worth to the State far more than it costs. Let us make it so.

Of course no board of education will ignore the law in regard to the display of the flag. No teacher will omit the flag salute nor the pledge of loyalty, nor will he neglect to invest this ceremony with the proper degree of dignity and solemnity. He will have the children sing our national songs; he will see that they know these songs by heart—and really by heart—and he will teach them to stand reverently while singing them.

No thoughtful teacher will neglect to teach the older pupils the immortal words of Lincoln's Gettysburg Address and of his second Inaugural Address, or such beautiful and inspiring words as those in the closing lines of Lowell's noble "Commemoration Ode" and in the last stanza of Longfellow's "Building of the Ship." To these might be added Julia Ward Howe's "Battle Hymn of the Republic" and Kipling's "Recessional." The spirit expressed in another of Kipling's poems might well be applied to America:

> There shall be one people—it shall serve one Lord—
> (Neither Priest nor Baron shall escape!)
> It shall have one speech and law, soul and strength and sword
> England's being hammered, hammered, hammered into shape!

Perhaps the most important of all—our program for the education of all the children and youth of the State between five and eighteen, so splendidly enunciated in the constitution of New Jersey, must go on. It would be a great mistake for boards of education, administrative officials or teachers to allow our schools—the organized instrument for the promotion of intelligent democracy, one of the purposes for which the war is fought—to become less efficient. Indeed, they should be made more useful in times like the present. There should be no halting in keeping the standards of the schools high.

Of course there must be no waste. There must be watchfulness, but undue economy in effort or money is a shortsighted policy in the preparation of hundreds of thousands of children and youth for the life before them.

Our educational processes must go on. The war already has cost our allies, as well as the countries with which we are at war, great numbers of men. It may so develop that we may lose many of our own men. So much the more necessary is it that the youth in our schools should be so trained that every individual who is left is made more fit as a citizen and more productive as a worker.

It may be necessary as a result of the war to establish schools later for the maimed and crippled here in New Jersey.

It is said that England in this crisis made the mistake of allowing her schools to become impaired. France evidently has done better, for, if information be correct, the activities of French schools have not been materially curtailed even during the throes of the great conflict in which that nation has been engaged.

Digitized by Google

In our national service, in peace or in war, the servant—who is also the master in a democracy—must be educated, must be trained, must be intelligent. Such is the vision of the teacher, such the purposes of schools at all times, but especially in these critical times.

CALVIN N. KENDALL
Commissioner of Education

A PROFESSIONAL READING-LIST

Cambridge, Massachusetts, teachers select their professional reading, done under the direction of the superintendent of schools, from the following list. The entire list is not read by all the teachers, but each book is read by many:

W. H. Smith, *All the Children of All the People*
Eliot, *A New Definition of the Cultivated Man*
Keady, *A Study of Fairy Tales*
Holmes, *Backward Children*
Brownlee, *Character Building in School*
Perry, *Discipline as a School Problem*
Eliot, *Education for Efficiency*
James, *Elementary Pedagogy*
Hurll, *How to Show Pictures to Children*
McMurry, *How to Study*
Charters, *Methods of Teaching*
Lee, *Play in Education*
Hyde, *Practical Ethics*
Briggs and Coffman, *Reading in the Public Schools*
Hughes, *Securing and Retaining Attention*
Hyde, *Self-Measurement*
O'Shea, *Social Development and Education*
James, *Some of Life's Ideals*
Earheart, *Teaching Children to Study*
Haliburton, *Teaching Poetry in the Grades*
McCracken, *The American Child*
Puffer, *The Boy and His Gang*
Shields, *The Dullard*
Bagley, *The Education Process*
W. H. Smith, *The Evolution of Dodd*
G. H. Palmer, *The Ideal Teacher*
Kirkpatrick, *The Individual in the Making*
McAndrew, *The Public and Its Schools*
Dewey, *The Schools of To-morrow*
Jane Addams, *The Spirit of Youth and the City Streets*
Hyde, *The Teacher's Philosophy*
Weimer, *The Way to the Heart of the Pupil*
Hunt, *Una Mary* (*Study of the Inner Life of a Child*)
Laselle and Wiley, *Vocations for Girls*

Digitized by Google

CURRENT EDUCATIONAL WRITINGS

I. REVIEW OF RECENT BOOKS IN SECONDARY-SCHOOL ENGLISH

ELLEN F. GEYER AND R. L. LYMAN
University of Chicago

In the field of the teaching of English two books have appeared in 1917 which easily take the front rank. The first of these, *English Composition as a Social Problem*,[1] written by S. A. Leonard, of Horace Mann High School, grows out of his experience as a supervisor of elementary- and of secondary-school English. Leonard attacks the dry rot of extreme formalism in teaching English composition and places the constructive work of children and young people on the sound basis of real authorship, recognizing, of course, the limitations of immature minds. The second book of professional merit for high-school English teachers is Thomas' *The Teaching of English in the Secondary School*.[2] The distinctive feature of this book is the judicial balance preserved by the author between traditional and the innovating methods. Thomas realizes that no sudden and violent breaking away from conservative programs is advisable. But all through his discussion there are emphasized newer ideas such as: composition, a training in right thinking; the incidental value of correct mechanics in writing; co-operation in teaching; the newer attitudes toward outside reading, etc.

These two books are by far the best professional books of the year. They are thoroughly in keeping with all that is best in *The Reorganization of English in Secondary Schools*.[3]

CLAXTON, P. P., AND MCGINNIS, JAMES. *Effective English.* Boston: Allyn & Bacon.

The text is unique both in material and in arrangement. Throughout the book the authors have attempted to meet the cultural influence of the classics as well as the needs of business life. The former they accomplish largely

[1] STERLING A. LEONARD, *English Composition as a Social Problem.* Boston: Houghton Mifflin Co.

[2] CHARLES SWAIN THOMAS, *The Teaching of English in the Secondary School.* Boston: Houghton Mifflin Co.

[3] *Reorganization of English in Secondary Schools.* By a committee of the National Education Association and of the National Council of Teachers of English, James F. Hosic, *chairman*. United States Bureau of Education, Bulletin, 1917, No. 2. $0.20.

Digitized by Google

through the use of pictures. The text is profusely illustrated with such pictures as Tadema's "Reading from Homer" and Miller's "The Boyhood of Raleigh." Under a teacher of broad experience in art and literature, the pictures offer an unusual opportunity to emphasize the influence of the fine arts upon civilization. Half of each lesson-plan is vocational in intention. Drill concerns itself with rhetorical principles, and the lesson assignments bend the oral and written compositions toward a consideration of industry, of professions, and of business usage.

LEWIS AND HOSIC. *Practical English for High Schools.* New York: American Book Co.

Indicative of the modern spirit in teaching, *Practical English for High Schools* introduces, under a new garb, vital principles for pupils' oral and written expression, such as journalism and bibliography, the use of facsimile copies of letters, letterheads, etc. The tactful introduction of etymology, though not named as such, makes a strong appeal to a progressive teacher, as does also the way in which rhetorical matter and grammar review are included. Furthermore, instead of the stereotyped chapter headings—"Punctuation" and "Letter Writing," for example, the authors use such headings as "Helping the Eyes," and "Visiting by Mail," which are unique in their attraction for youths. Purposeful practice is given in every subject and illustrations are chosen from the standard authors that children are most likely to know. There is good judgment in the classification and reorganization of the subject-matter as a whole.

OPDYCKE, JOHN B. *Working Composition.* Boston: D. C. Heath & Co.

The aim of *Working Composition*, as stated by the author, is to connect composition with life and work and human experience. He has almost completely separated composition from the study of literature. The most suitable place in which this book could be used is a business college. The topics are, with a few exceptions, those which would appeal to boys alone. This book, in the hands of an efficient teacher, will suggest devices to arouse and maintain the interest of his class. The mass of material presented makes the textbook somewhat unwieldy.

HALL, J. LESSLIE. *English Usage.* Chicago: Scott, Foresman & Co.

If it is true that "long usage is the highest of linguistic authorities," Hall has made a real contribution in his book entitled *English Usage.* He covers a wide range of questionable expressions and sets before us references and examples both "pro" and "con." Even though decisions are given concerning very few of the expressions, the reader being left to his own judgment, value

Digitized by Google

lies in the fact that concerning many of these expressions no irrevocable decisions can be made. Those who have waged war on the double negative, participles, misplaced relative clauses, and the use of the objective case before a participle may be compelled to bow to honorable precedent. It is satisfying to have the precedent within easy reach.

BAMBURGH, WILLIAM CUSHING. *Talks on Business Correspondence.* Boston: Little, Brown & Co.

This book makes no special contribution to the teaching of business English. The several sections devoted to the writing of business letters are very good, but they offer no new suggestions to the well-trained teacher in that field. The remainder of the book is devoted to other phases of correspondence, the correct filing of letters, the handling of mail, the stenographic department, etc.

The book is full of excellent details, and a few copies in the library of the commercial department might not be amiss; but its rightful place is the desk of the untrained official in charge of office correspondence.

CUNLIFFE, J. W., AND LOMER, GERHART R. *Writing of To-day; Models of Journalistic Prose.* New York: Century Co.

This book is a collection of articles from magazines and newspapers, varying from *Good Housekeeping* to the *Nation*, the *Manchester Guardian*, and the *Atlantic Monthly*. The articles are classified under descriptive, editorial, humorous, and occasional articles, personal interviews, and expository and literary, dramatic and musical, criticism.

The selections offer wide variety and the appeal of comparative newness. The book is an excellent one for a teacher in this branch of work.

BASSETT, LEE EMERSON. *A Handbook of Oral Reading.* Boston: Houghton Mifflin Co.

The high-school teacher of public speaking will be interested in this book, which sets forth very forcibly the principles of natural oral expression. The author emphasizes the belief, which all teachers of public speaking are now beginning to hold, that the idea of the writer should govern the expression of the reader. The student should be taught to interpret correctly and to indicate that interpretation in his voice. The book is opposed to the old school of elocution, in that it gives no rules for gesticulation or inflection.

Most of the illustrative material consists of excerpts from the works of standard authors. The book might be more attractive to the high-school student if more of the selections were from contemporary literature.

Digitized by Google

BREWER, JOHN M. *Oral English.* Boston: Ginn & Co.

Oral English, by John M. Brewer, embodies the very latest in the teaching of oral English. It gives evidence of a keen appreciation of what modern English demands; it is practical. The author evidently realizes that our modern needs are not the imitation of the old masterpieces with their characteristic elocutionary style, but the development of direct, effective speaking that is convincing and to the point. The topics suggested are vital and interesting and could be used for written themes as well as for oral. The section dealing with argumentation and parliamentary law is very helpful to literary societies and debating classes.

FULTON, M. G. *Southern Life in Southern Literature.* Boston: Ginn & Co.

Southern Life in Southern Literature should be an acceptable book for supplementary reading in any high school, but particularly in the South, where its historical element would naturally make the greatest appeal and would serve as an excellent approach to the book. The author's emphasis on the "life and character," which is well placed, seems to have especial bearing on Parts I and II, "The Old South in Literature" and "Poetry of the Civil War." As a whole, the book is well organized, satisfactory in the point of notes, both explanatory and biographical, and commendable for the selection of subject-matter.

Atlantic Classics. Atlantic Monthly Co.

The book is a collection of sixteen essays selected from the *Atlantic Monthly*. The essays are representative both as to types and to authors. The selection will be very useful to teachers who have wished to offer courses in magazine exposition, but have found the subscribing for magazines impractical.

MILLER, E. J. *English Literature, A Guide to the Best Reading.* Philadelphia: J. B. Lippincott & Co.

Mr. Miller's *English Literature* is particularly strong in the number and quality of its quotations and selections from the *Great Masterpieces*. The critical comment is good in the main, though at times it seems more positive and final than is necessary for the guidance of the young.

The book, moreover, is strictly up to the minute in its content, the epilogue having been added since the declaration of war against Germany. All the great and near-great moderns get honorable mention, Wells, Shaw, and the rest, so that the student is in no danger of regarding *this* literature as ancient history. The illustrations, copies of portraits, facsimiles of first editions, and manuscript pages add much to the general value of the volume.

Digitized by Google

BOWMAN, JAMES CLOYD. *The Promise of Country Life.* Boston: D. C. Heath & Co.

The Promise of Country Life is the attractive title of a book of descriptions and narrations to be used as models in an agricultural course in English.

The work has been carefully planned. The author says in his preface:

> The first group of selections has to do with the type of individual who is most at home in the country; the second treats of the pleasures which may be found in solitude; the third shows how various types of men have found enjoyment in a rural environment; the fourth contrasts life in a city with a rural environment; still another describes man's mastery over the crops of the fields and domestic animals. One story depicts the unstinted loyalty of man's best out-of-door friend, the dog; one story pitilessly portrays the meager life of those who are too impoverished of soul to enjoy what the country has to give; finally, a group of stories discusses the various sociological and economic problems of farm life.

Since, however, the selections have been chosen from such well-known writers as John Burroughs, Hamlin Garland, James Lane Allen, Corra Harris, Guy de Maupassant, and Lyoff N. Tolstoi, the order in which the selections are placed is of slight importance.

The Introduction includes an analysis of method in description, simple narrative without plot, and short story, which most high-school teachers will find very suggestive. Although the text is evidently intended for college use, the selections are not too difficult for advanced high-school students. In schools where library facilities are limited, the book will furnish the reader of American literature a wide range of modern American writers.

LONG, WILLIAM J. *Outlines of English and American Literature.* Boston: Ginn & Co.

The text is a single-volume combination of English and American literature. The new volume retains the literary excellence of the earlier editions. It has been made compact, not by compressing the history of the writers mentioned in the two volumes into smaller space, but by omitting minor writers; for instance, the period in American history preceding the American Revolution is included in ten pages. In the conclusion of the volume, however, twenty pages have been reserved for writers since 1876.

PAYNE, LEONIDAS WARREN, JR. *American Literary Readings.* Chicago: Rand McNally & Co.

Professor Payne, of the University of Texas, has prepared an admirable anthology of selections from leading American authors. He shows excellent judgment in ignoring all writers before Washington Irving. Moreover, the editor has had in mind sound practice in the teaching of literature to high-school classes. Mere bibliographical details are reduced to a nimimum, a

Digitized by Google

few paragraphs in the case of each writer setting forth all the necessary facts. Classes which use Mr. Payne's book will dwell upon well-selected portions of each American author's literary work. The text is especially commended for small high schools whose library facilities are limited.

O'NEILL, LAYCOCK, AND SCALES. *Argumentation in Debate.* New York: Macmillan.

FOSTER, WILLIAM TRUFANT. *Argumentation and Debating.* Rev. ed. Boston: Houghton Mifflin Co.

Attractive and greatly improved editions of these two well-known college texts in argumentation have just appeared. The first, originally prepared by two Dartmouth teachers, has been thoroughly rewritten by J. Milton O'Neill, professor of rhetoric and oratory in the University of Wisconsin. Professor O'Neill is thoroughly trained in the law; hence he has given to the chapters which deal with evidence and refutation a practical turn often missing in books on argumentation written by laymen. The second text is revised by the author, President Foster, of Reed College, Portland, Oregon. Fresh and timely illustrations bring the book down to date. Moreover, the Houghton Mifflin Co. has produced a book well-nigh mechanically perfect in form and appearance.

II. BOOKNOTES AND REVIEWS

SANDESON, E. D., AND PEAIRS, L. M. *School Entomology—An Elementary Textbook of Entomology for Secondary Schools and Agricultural Short Courses.* New York: John Wiley & Sons, 1917. Cloth. Pp. vii+356, 253 figures. $1.50 net.

This book is composed of two parts, the first dealing with the general aspects of the subject and the second with the economic aspects. Part I aims to present the subject so that it can be covered in the time that the schools may reasonably be expected to give to it. Part II purposes to give as concise an idea of the more common injurious forms of insect life as is possible in a limited space. There are thirteen chapters in the first part and six in the second.

It is likely that Part I, "Economic Entomology," will be of most interest and value to those for whom the work is designed. It contains a chapter each on the following subjects: "Insects Affecting Man and Domestic Animals," "Insects Affecting Household Goods and Stored Food Products," "Field Crop Insects," "Garden Insects, Orchard Insects, and Insect Control." This part also contains an appendix in which are listed the publications on injurious insects, which may be secured free of charge from the Secretary of Agriculture or from the several state agricultural experiment stations, the addresses of which are given.

Digitized by Google

The book is one of the "Wiley Technical Series" for vocational and industrial schools. It should prove a valuable reference work for classes in general science and in agriculture in schools which do not attempt to give a separate course in entomology.

DAVIS, K. C. *Productive Plant Husbandry—A Textbook for High Schools.* Philadelphia: J. B. Lippincott Co. 8vo, pp. 462, 312 illustrations. $1.75 net.

Professor Davis' first volume in the new "Farm Life Text Series," to be published by the J. B. Lippincott Company, is certain to meet with favor among the high-school teachers of agriculture the country over. The book is written particularly for school use and is to be covered during one school year.

The author starts out by giving the principles of plant growth and breeding, for the comprehension of which a preliminary study of botany is unnecessary, and follows this with a discussion of seeds and propagation. After this introductory material come five chapters on the general subjects of "Soils and Their Uses," "Water and Soils," "Conservation and Improvement of Soils," "Drainage and Irrigation," and "Crop Rotation." Following these are fifteen chapters devoted to the specific crops, viz.: "Grasses," "Leguminous Crops," "Corn," "Small Grains," "Potatoes," "Sugar Beets and Other Roots," "Vegetables," "Cotton," "Minor Fiber Crops," "Sugar Cane," "Fruits, Large and Small," "Forest Products," and "Tobacco." The concluding chapters deal with "Weeds," "Economic Insects," "Plant Diseases," "Methods of Controlling Insects and Plant Diseases," "The Business of Farming," and "The Rural Community."

From the standpoint of its pedagogical merits the book is rather superior. To each chapter there is added "Field and Laboratory Exercises" as well as "Questions and Problems." There are also copious references for further study. The illustrations are numerous and clear and really illustrate the text. Teachers interested in texts in agriculture providing material for a one-year course will do well to examine Professor Davis' book with some care before they select a text for their course.

TOWERS, W. K. *Masters of Space.* New York: Harper & Brothers, 1917. Pp. 301. $1.25.

The masters receiving chief consideration in this book are Morse, Thompson, Bell, Marconi, and Carty. More than a mere bibliography of these individuals is given. In fact, the work is the story of talking at distance, of sending messages through space. The following quotation from the Preface is an excellent summary of the contents of the book:

> The story opens with the primitive methods of message-sending by fire or smoke or other signals. The life and experiments of Morse are then pictured and the dramatic story of the invention and development of the telegraph is set forth. The submarine cable followed with the struggles of Field, the business executive, and Thompson, the

Digitized by Google

inventor and scientific expert, which finally culminated in success when the *Great Eastern* landed a practical cable on the American coast. The early life of Alexander Graham Bell was full of color, and I have told the story of his patient investigations of human speech and hearing, which finally culminated in a practical telephone. There follows the fascinating story of Marconi and the wireless telegraph. Last comes the story of the wireless telephone, that newest wonder which has come among us so recently that we can scarcely realize that it is here. An inner view of the marvelous development of the telephone is added in an appendix.

History teachers will find valuable reference material in this volume. It will do good service in the upper elementary grades as well as in the high school. The paucity of such material has been a great handicap to history teachers in the past, for which reason this book will doubtless receive a hearty welcome.

THWING, C. F. *Education According to Some Modern Masters.* New York: Platt & Peck Co., 1916. Pp. 296. $2.00.

The complete title of President Thwing's work is *Education According to Emerson, Carlyle, Ruskin, John Stuart Mill, Gladstone, Matthew Arnold, John Henry Newman and Goethe.* The book aims to save education from what the author calls the peril of losing its human touch. It is his belief that such a discussion as he presents of the foregoing great humanists will do much to counteract the modern tendency of the overemphasis on technical means, methods, and conditions.

The author's method in treating the foregoing masters is to quote freely from their writings, and on the basis of these quotations to draw certain conclusions relative to their ideas concerning education. Because these quotations make up such a large portion of the book, it can be spoken of as a humanistic sourcebook in modern education. For a reference book in a course in the history of modern education the chief value of the book will be found in the direct quotations and the author's summary and concluding chapter.

KITTREDGE, MABEL HYDE. *The Home and Its Management.* New York: Century Co.

This book is a further expansion, with some additions, of the material which Miss Kittredge has presented in her two earlier books, *Practical Home Making* and *A Second Course in Home Making.*

It is quite difficult to analyze the function of *The Home and Its Management,* though in the main the material seems to be best adapted to the interests of a group whose families need concrete suggestions to assist them in maintaining a sanitary home and an efficient standard of living. It does not seem adapted to use as a text in public-school classes. In spite of the apparently limited function of this book, there are, however, a great many suggestions about living conditions, such as a discussion of the treatment of servants, which hardly belong in a textbook for use in settlement or home-training classes.

Digitized by Google

While the book contains a great deal of information in regard to the processes involved in the care of the home and the family, the material is treated very empirically, and the fundamental principles underlying the processes are never discussed. It seems almost a self-evident fact that the greatest need of the housekeeper at the present time is the ability to evaluate her time and to learn thereby how to maintain an efficient home with the least expenditure of effort. There is no attempt in Miss Kittredge's book to even suggest this problem, and many of the methods of work that are given are unnecessarily time-consuming.

About one-third of the book is devoted to the subject of cooking and recipes for dishes. The particular problems selected for this section seem too elaborate for the group for whom this book is planned. The material on meal-planning and dietaries is quite inadequate and unconvincing, and the method of treatment is formal. It seems very unfortunate that a book planned for practical information for the housekeeper should fail to present the selection of foods in terms of the quantities of specific food materials rather than in terms of quantities of protein and energy.

The chapter on city waste, while it presents primarily a New York situation, is valuable material. If more material giving information on the relationship of the household to the community were incorporated in this book, it would greatly enhance its value.

A. R. HANNA

UNIVERSITY OF CHICAGO

WELLMAN, MABEL T. *Food Study*. Boston: Little, Brown & Co.

Miss Wellman's book is a distinct addition to the available secondary-school texts on foods. Her most valuable contribution is in the excellent quality of the subject-matter presented. This material is accurate, well selected, and clearly and simply written. It includes explanations of the principles of physics, chemistry, and bacteriology that are encountered in the preparation of foods as well as general information about food materials. This text material is not only well selected, but it is presented in such a sequence that there is a gradual development of the material adapted to the comprehension and progress of the students.

Food Study outlines a half-unit course in foods which adequately covers the essential problems in food preparation and composition that are fundamental to further work in the selection of foods from a dietary and economic standpoint. The material is organized into definite lessons, the general plan being to present in each lesson experimental work, practical problems, text material, references, and study problems. While in the main the book is most effective if used in the order of chapters suggested, it is quite possible to make some rearrangement of the order to suit individual conditions. The questions at the end of each chapter are excellent and suggest valuable problems for

Digitized by Google

reference reading or investigation, and the references listed are adapted to the capacity of secondary-school pupils.

While the organization of this book into definite teaching units plainly limits its function to a textbook for a short course in foods, it is well done and it will serve a definite need.

A. R. HANNA

UNIVERSITY OF CHICAGO

III. PUBLICATIONS RECEIVED

(Detailed discussions of some of the following books will appear later.)

BOVARD, WILLIAM S. *Adults in the Sunday School.* New York: Abingdon Press, 1917. Pp. 196. $1.00.

Discusses the main features of the adult Bible class movement and offers practical suggestions as to the material and methods of teaching in adult Bible classes.

Bureau of Educational Experiments. Bulletins One, Two, Three, Four, and Five. New York, 1917. $0.10 each.

Three of these bulletins deal with experimental schools, one with playthings, and one with the study of animal families in schools.

CARDON, LEOPOLD. *A Practical French Course.* Boston: Silver, Burdett & Co., 1917. Pp. 443.

GAREY and ELLIS. *The Junior Plattsburg Manual.* New York: Century Co., 1917. Pp. 299. $1.50.

A textbook for the preparatory, public, and high schools of the United States on physical and military training.

CLARK, ALBERT W. *Graded Writing Textbook.* Boston: Ginn & Co., 1917.

DAVIS, K. C. *Productive Plant Husbandry.* Philadelphia: J. B. Lippincott Co., 1917. 8vo, pp. 462. $1.75 net.

One of the Lippincott "Farm Life Text Series." A textbook for high schools. Contains material on plant propagation, plant breeding, soils, field crops, gardening, fruit-growing, forestry, insects, plant diseases, and farm management.

DIFFENDORFER, RALPH E. *Missionary Education in Home and School.* New York: Abingdon Press, 1917. Pp. 407. $1.50.

ELY and WICKER. *Elementary Principles of Economics (Revised).* New York: Macmillan, 1917. Pp. 246.

MACE, WILLIAM H. *A Beginner's History.* Chicago: Rand McNally & Co., 1916. Cloth. 12mo, pp. 404. $0.60.

Written biographically. Rich in the romance of exploration and pioneer achievements. Many illustrations and maps. A text for the intermediate grades.

MILLER, ERNEST A. *Making the Old Sunday School New.* New York: Methodist Book Concern, 1917. Pp. 100. $0.50.

Digitized by Google

O'SHEA, HALBROOK, and COOK. *Every-Day Speller*. Books I, II, III, and IV. Indianapolis, Ind.: Bobbs-Merrill Co., 1917.

These four books provide material on spelling for each of the eight grades of the elementary school, each book containing material for two grades.

PACKARD, JOHN CALVIN. *Everyday Physics*. A Laboratory Manual. Boston: Ginn & Co., 1917. $1.00.

A laboratory manual which outlines a course in physics, adapted equally well for college preparation and for the immediate requirements of everyday life. A large number of exercises recently developed in the high-school laboratory, with a selected number from the standard list, form the contents of the book. So far as possible standard apparatus has been used. The newer exercises require commercial apparatus which may be easily procured.

PICKETT, WILSON, and SMITH. *Cyclopedia of Temperance, Prohibition, and Public Morals*. New York: Methodist Book Concern, 1917. Pp. 406. $0.50 net.

PINTNER and PATERSON. *A Scale of Performance Tests*. New York: D. Appleton & Co., 1917. Pp. 213.

PYLE, W. H. *The Science of Human Nature*. Boston: Silver, Burdett & Co., 1917.

A book in the "Teacher Training Series," edited by Professor W. W. Charters. Aims to present a course in beginning psychology for students in high schools and normal schools.

RORAY, N. L. *Industrial Arithmetic for Girls*. Philadelphia: P. Blakiston's Son & Co., 1917. Pp. 196. $0.75.

An elementary text in home economics. Many applied problems. Presupposes a knowledge of the first seven years' work of elementary-school arithmetic. Arranged by lessons.

SANDERSON and PEAIRS. *School Entomology*. New York: John Wiley & Sons, 1917. Pp. 356.

An elementary textbook of entomology for secondary schools and agricultural short courses. It is one of the "Wiley Technical Series" for vocational and industrial schools.

TAYLOR, CHARLES K. *The Boys' Camp Manual*. New York: Century Co., 1917. Pp. 236. $1.25.

A handbook of military and all-round training, with special stress upon physical development and physical training.

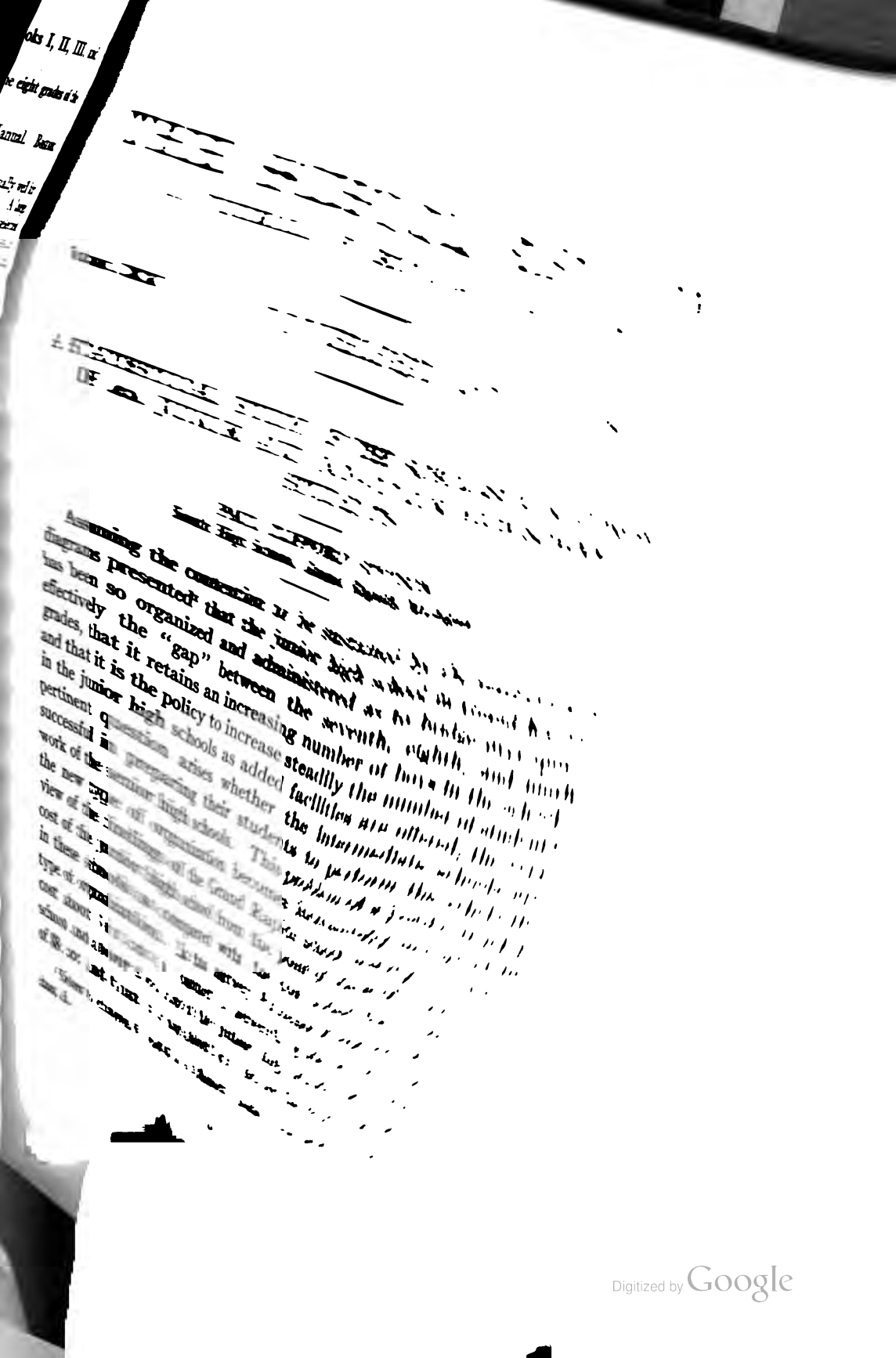
THURSTONE, LOUIS L. *Freehand Lettering*. Chicago: B. D. Berry Co., 1915.

A course of exercises in single-stroke freehand lettering adapted for classes in mechanical drawing.

WINCHESTER, B. S. *Religious Education and Democracy*. New York: Abingdon Press, 1917. Pp. 293. $1.50.

Contains much valuable material for one interested in plans and programs relative to week-day religious instruction. Part II (123 pages) is made up entirely of documents giving in considerable detail outlines and curricula and plans of moral and religious instruction.

Digitized by Google



Digitized by Google

the old plan and nearly $20.00 under the new, or a difference of $8.00.[1]

Restated in terms of the cost the problem is: In view of the fact that the instruction costs more under the junior high-school plan of organization than under the old scheme, can the justification of this added expense be found in the increased ability of the intermediate-school pupils to perform the work of the senior high school? That is, does the plan of departmental teaching have results which "carry over" in form of better scholastic work in the senior school? It is not suggested that this is the only way in which to measure the work of the junior high school, nor that the entire justification rests with the findings of such a survey, but merely that it offers a medium through which some valuable statistics may be secured and some precise measurements made.

In order to make this study of the intermediate schools in this city, the records of 404 students who were graduated from the Central and Union high schools in 1916 were compiled. One half of the students had had their preparatory training in the traditional elementary school, and one half under the junior high-school type of organization. The graduates of 1916 were chosen for several reasons. In the first place, those who had had the intermediate-school training would have had three years under the departmental teaching; in the second place, it was the first year that a class trained in the junior high school had had time to complete the senior high school; and, again, it represented the end of the first five years of the existence of the newer type of schools. The pupils who were chosen represented, as far as possible, no particular section of the city, but took in all parts of the school system; that is, the students chosen do not represent a selected lot, except in so far as any high-school graduates are selected. All of the records studied were of graduates of the two high schools. This fact, of course, eliminates certain types and makes the problem less complicated. One hundred and twenty of the students whose records were taken were graduates of the Union School. This high school is situated on the west side of the city, and its students come largely from the homes of the so-called "middle" and

[1] *Grand Rapids School Survey* (1916), pp. 432–38.

Digitized by Google

industrial class, while the Central High School, although all classes are represented in it as in any large high school, draws from what are commonly known as the better residential portions of the city.

After the records had been selected, the entire number was rearranged so that the two groups, except in the matter of preparation, would be comparable. All sections of the city are represented in both groups. Following the choosing of the 404 cards, the record of each was traced back to the sixth grade. This, it was felt, furnished a common starting-ground. In this grade, all would have received the same kind of instruction under the same plan of organization. The record of each was then carried forward through the twelfth grade. Each student's report represents, then, a study of seven years of his public-school training.

The subjects of English and mathematics were chosen because they are the two constants of the curriculum. Three years of English and two years of mathematics are required here for graduation from the senior high school, and in the junior high school all are required to take those subjects. This is also true, of course, in the sixth grade.

The last half of each year was taken as a basis of measurement because the assumption was made that in this last half-year the work begun in the first was completed; also, because no mid-year classes are graduated from the senior high school. In the system in use here, 6-2, 7-2, 8-2, etc., refer to the second half of the grade indicated.

In the accompanying tables the frequency distribution was charted for Grade 6-2 as the period when all the pupils finished the work which it is assumed they had under a common form of organization; 7-2 as the grade when they had finished their first year under a separate plan of organization; 9-2 as the time when the junior high-school groups were through with their intermediate-school training, and the non-junior students had finished their first year in the ninth grade and were ready for the senior work; and 12-2 as the time when each had had three years of senior high-school training.

In Grand Rapids, a mark between 70 and 75 is called a "condition" and below 70 "failed." This table indicates that there were

Digitized by Google

more failures throughout in the non-junior high-school group than in the junior. In the seven grades, 39 of the junior group were below passing, 20 having conditions and 19 failing. For the same grades in the non-junior group, there were 56 who fell below 75 per cent, 29 having conditions and 27 failing outright. The distribution of this grade is important and interesting. The median

TABLE I

THE DISTRIBUTION OF EACH GROUP IN ENGLISH IN GRADES 6-2 TO 12-2 INCLUSIVE

CLASS INTERVALS	GRADES						
	6-2	7-2	8-2	9-2	10-2	11-2	12-2
	Junior High-School Group						
95–100	42	33	38	23	19	15	12
90– 94.99	6	17	54	40	25	23	19
85– 89.99	65	72	54	62	53	53	45
80– 84.99	54	54	44	52	71	78	41
75– 79.99	1	3	5	23	13	18	7
70– 74.99	4	.....	1	1	5	9	.....
65– 69.99	1	2	.....	.....	9	2	1
60– 64.99	2	1	.....	.....	1	.....	.....
	Non-Junior High-School Group						
95–100	29	30	43	19	19	19	10
90– 94.99	6	10	9	32	22	13	14
85– 89.99	80	77	91	67	44	47	47
80– 84.99	58	66	51	59	83	84	41
75– 79.99	5	3	1	16	18	19	6
70– 74.99	5	.....	4	6	5	8	1
65– 69.99	2	7	.....	2	5	8	.....
60– 64.99	3	.....	.....	.....	.....	.....	.....

of the junior high-school group is 86.96 per cent, and of the non-junior group 86.30 per cent. This in itself indicates that there is a remarkable similarity in the dispersion of the groups. It is at once evident that we have two groups which are comparable from the standpoint of distribution around the median.

When the two groups have finished their 7-2 work, we find the distribution practically unchanged in its essential features. In the junior high-school group, there are 3 who fall below passing, all of them being failures. In the non-junior high-school group, there are 7 who fall below 75 per cent, all of them failures. The

Digitized by Google

median for the intermediate group is 87.15 per cent and for the non-intermediate 86.29 per cent. Both of the medians fall in the class interval 85–89.99 per cent, as do the medians for the 6-2. The difference here is not, however, in any sense large, being 33 for one and 30 for the other. At the median there are only 5 more cases in the latter group than in the former.

It is very clear, then, that at the end of the first year no effect has been made on their distribution. The two groups which were so close together in the sixth grade are still almost homogeneous.

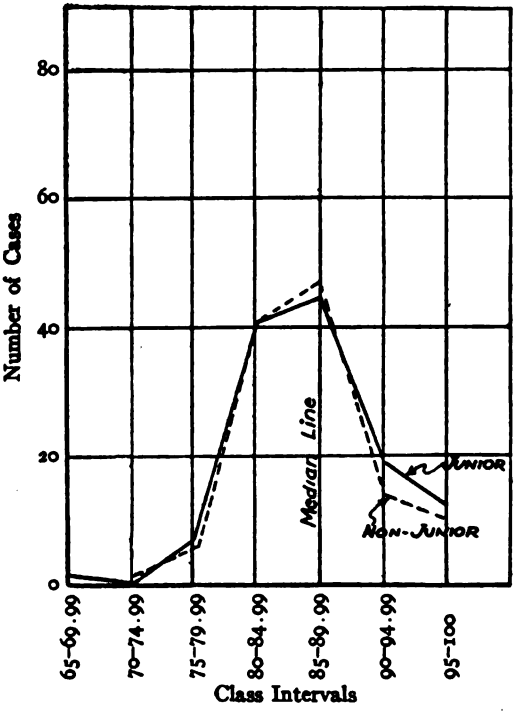
One would be justified, however, in looking for some decided change in the groups by the time each has finished the ninth grade. The distribution here becomes as important as in the sixth grade, because the two groups are about to enter upon their senior high-school work. In this grade there are 6 who got conditions and 2 who failed in the non-junior high-school group, and only 1 who got below passing in the junior high-school groups, and that was a condition. However, except for a redistribution around the median line, no essential difference in the two groups is apparent. The medians are very close, being 86.97 per cent for the junior high-school group and 86.29 per cent for the non-junior group. Both medians fall, as they did in the two preceding grades, in the class interval of 85–89.99 per cent. An interesting point is that the median for Grade 9-2 of each group is almost identical with that of the 6-2 median for each group. The 6-2 median for the junior high-school group is 86.96 per cent, and the 9-2, 86.97 per cent. The median for the non-junior high-school group in Grade 6-2 is 86.30 per cent, and in Grade 9-2, 86.29 per cent.

In the ninth-grade distribution, at the end of the junior high-school training for the one group and of the regular ninth-grade work for the other, and at the beginning of the senior high-school work for both, there is still no disparity in the frequency distribution of the two groups.

At the end of the senior high-school work it is very evident that there is still little difference in the two groups. There is one failure in the junior high-school section and one condition in the non-junior high-school. Fig. 1 indicates that, instead of drawing apart, the two groups display a tendency to parallel more closely in each

Digitized by Google

grade. This is so true that, if the same colored line were used in drawing both curves, it would be very difficult to distinguish one from the other. The medians are 86.5 per cent for the junior high-school group and 86.21 per cent for the non-junior group. The average median for the entire seven years in English is 86.01 per cent for the intermediate group and 85.23 per cent for the non-intermediate group.



Junior High Median.....86.49 per cent
Non-Junior High Median..86.21 per cent

FIG. 1.—Distribution around the median for 12-2 English.

Another measure which will show the compactness of the groups is the quartile deviation of each.

Table II indicates very clearly that the longer the two groups stay in school the closer they get in ability in English. While the quartile deviations of the junior group display more fluctuation than the other, that is, although they are apparently farther apart in Grades 8-2, 9-2, and 10-2 than they were in Grade 7-2, still the deviation is small and shows a close homogeneity in the eleventh and twelfth grades. In a study of the quartile deviations of the non-junior group, it is apparent that there is even a closer homogeneity than is present in the junior group.

A study of the quartile deviations of the junior group indicates that they are quite close together in ability in the seventh grade,

Digitized by Google

but that Grades 8-2, 9-2, and 10-2 present a greater variation. However, it is interesting to note that after Grade 8-2 a readjustment occurs and the group grows gradually closer together.

TABLE II

THE QUARTILE DEVIATIONS OF THE JUNIOR AND NON-JUNIOR HIGH-SCHOOL GROUPS IN ENGLISH FOR GRADES 6-2 TO 12-2 INCLUSIVE

Grade	Junior High-School Group	Non-Junior High-School Group
6-2.....	5.123	5.25
7-2.....	3.383	3.289
8-2.....	4.553	3.342
9-2.....	4.54	3.902
10-2.....	4.03	3.891
11-2.....	3.806	3.643
12-2.....	3.574	3.317
Average...	3.280	3.451

The non-junior group displays no such violent fluctuations, however, and indicates that there were no decided readjustments to be made in the seventh and eighth grades. From the ninth grade through the twelfth the quartile deviations decrease each year.

From this study of the distribution around English and of the quartile deviations for both sections, it is very evident that there is no change in the relative positions of the two groups as related to each other in Grade 6-2 in English. This is apparently only another way of saying that the two groups start out almost equal in ability to perform the work in English and that they retain that equality throughout the seven years. The difference in form of organization seems to have had little influence on their scholastic work in English.

Having studied the work in English, we are interested in finding out what happens in the case of mathematics. Table III gives the distribution by grades for this subject in each section.

A comparison of the number of failures in mathematics for each group shows that there are 21 conditions and 23 failures in the junior high-school group and 48 conditions and 22 failures in the non-junior group. Apparently the former group was able to

Digitized by Google

perform the work somewhat more easily than the latter. The advantage, however, is small.

TABLE III

THE FREQUENCY DISTRIBUTION OF EACH GROUP IN MATHEMATICS FOR GRADES 6-2 TO 12-2 INCLUSIVE

CLASS INTERVALS	GRADES							
	6-2	7-2	8-2	9-2	10-2	11-2	12-2	Average
	Junior High-School Group							
95–100	32	36	54	37	6	10	5	4
90– 94.99	12	23	19	25	4	10	3	32
85– 89.99	62	51	60	28	13	31	5	74
80– 84.99	55	57	61	69	11	51	5	66
75– 79.99	3	3	7	16	12	27	1	20
70– 74.99	4	5	.....	2	.....	6	.....	4
65– 69.99	2	1	.....	7	1	.....	.....	1
60– 64.99	3	1	.....	7	.....	.....	.....	.....
	Non-Junior High-School Groups							
95–100	29	27	34	37	11	9	3	3
90– 94.99	9	8	9	25	6	14	2	21
85– 89.99	57	75	92	39	18	20	11	68
80– 84.99	65	73	60	61	22	54	5	74
75– 79.99	4	3	4	18	9	22	1	30
70– 74.99	15	6	2	10	.....	9	1	5
85– 69.99	2	3	.....	6	.....	.....	.....	.....
60– 64.99	3	1	.....	5	2	.....	.....	.....

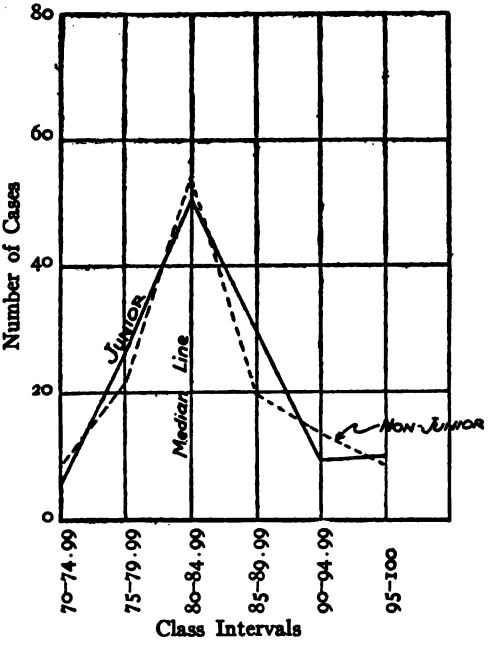
In Grade 6-2 in mathematics, there are 4 conditions and 5 failures in the junior high-school section as compared with 15 conditions and 5 failures in the non-junior section. The distribution around the median for the 6-2 mathematics indicates that the two sections are almost evenly distributed. The median for the intermediate group is 86.56 per cent and for the non-intermediate group 85.25 per cent. As was the case with the English, there are more cases in the two upper-class intervals for the junior high-school group than there are for the non-junior high-school section.

The median for the junior high-school group is 87.13 per cent, and for the non-junior group 85.79 per cent, a difference of only 1.4 per cent. There are 5 conditions and 2 failures in the one group, and 6 conditions and 4 failures in the other. However, no great difference between the two groups is evident.

Digitized by Google

The 9-2 distribution is interesting because it is the grade at which both groups end their work under a different scheme of administration, and because it shows what happens when each group for the first time undertakes algebra. Under the course of study in force, both sections begin algebra in the ninth grade. The junior high-school group has 14 conditions and 2 failures and the non-junior group 10 conditions and 11 failures. This indicates a slight superiority on the part of the former section. The median for the intermediate section is 84.95 per cent, and for the non-intermediate section 85.05 per cent.

In Grade 12-2 there were very few students taking mathematics, so few, indeed, that the curve was plotted for the eleventh grade. One of two things took place—either the junior high-school group finished their two years' required work in that subject and stopped, or they were able to finish it earlier in the course. In Grade 11-2 there are 8 conditions for the junior high-school and 9 for the non-junior high-school sections. The median in this grade for the former is 82.88 per cent, and for the latter 83.04 per cent. The curve in Fig. 2 indicates that the relative positions of the two curves have not changed much, and that there are still more cases around the median of the non-junior group than of the junior group. The average median for the entire seven grades in



Junior High Median.....82.88 per cent
Non-Junior High Median..83.04 per cent

FIG. 2.—Distribution around the median for 11-2 mathematics.

Digitized by Google

mathematics for both groups is 85.63 per cent for the junior group, and 84.34 per cent for the non-junior group.

Throughout the study of the distribution of each group in mathematics, as in the case of English, there is no marked tendency to alter the relative positions in which the two groups were distributed in the sixth grade. There is no indication of any large readjustment in the relations of the two groups.

A statement of the quartile deviations of each group in mathematics will show the same thing to hold true.

TABLE IV

THE QUARTILE DEVIATIONS OF THE JUNIOR AND NON-JUNIOR HIGH-SCHOOL GROUPS IN MATHEMATICS FOR GRADES 6-2 TO 12-2 INCLUSIVE

Grade	Junior High-School Group	Non-Junior High-School Group
6-2	3.74	3.808
7-2	4.915	3.306
8-2	5.239	2.679
9-2	5.782	5.719
10-2	7.429	4.323
11-2	3.86	3.824
12-2	5.838	2.91
Average...	3.568	3.525

This indicates that the longer the students of the junior high-school group are in the intermediate and senior high schools *the greater is the difference in their ability in mathematics*. This is an argument for the revision of the course. On the other hand, the students of the sixth, seventh, and eighth grades of the non-junior high-school group get closer together in ability to do the work. This may be due to the fact that they are under the same plan of organization and have no decided readjustments to make. The ninth grade, however, indicates that the first year in mathematics of a more advanced kind causes a more decided variation in their ability to do the work. The variation is larger for the non-junior high-school than for the junior high-school section, the quartile being 5.719 in Grade 9-2 and 2.679 in the eighth grade for the former, and 5.782 in the ninth grade and 5.239 in the eighth grade

Digitized by Google

for the latter. This would seem to indicate that the intermediate-school pupils had made their readjustment to the new conditions, whereas the other students were in the process of readjustment. From this point on through the senior high-school mathematics, the non-junior group grows closer together in ability. The average deviation for the junior high-school section is 3.568, and for the non-junior section, 3.525, indicating the compactness of each group.

Another method of testing and comparing the success of the two groups in the senior high school is to compare the median achievements of each group in English and mathematics by grades. The medians of each group are shown in the Tables V and VI.

Fig. 3 shows very graphically the relationship between the two groups in English. The median achievement of each is very closely related to the other. Starting with Grade 6-2, in which the junior high-school group has a median of 86.95 per cent and the non-junior high-school group 86.30 per cent, the two curves parallel each other throughout the seven years. The first three years, or through the eighth grade, the curve steadily rises for both, but drops in the ninth grade. The end of the ninth grade finds the median achievement of each group to be almost identical. For the junior high-school group it is 86.96 per cent, and for the non-junior group 86.29 per cent, a difference of only 0.7 per cent. From the standpoint of median achievement, the students of the non-junior group were quite as well able to perform the ninth-grade work as those of the junior group. The upward slope in the last year is due, no doubt, to the fact that only the pupils proficient in English and those who have failed in previous years and are repeating their work elect English in the last year in the senior high school.

At the close of their senior high-school work the two groups are separated in their median ability by only 0.28 per cent, the junior median being 86.49 per cent and the non-junior median 86.21 per cent. While it is evident from Fig. 3 that the median ability of the intermediate-school group is slightly better than that of the non-intermediate group, the difference at the most is only 2.1 per cent in the eighth grade. This advantage is hardly large enough to constitute an argument for the superior work in English under the

Digitized by Google

junior high-school plan of organization. The average median achievement of the junior high-school group is 85.63 per cent and of the non-junior group 84.34 per cent, a difference of only 1.3 per cent.

TABLE V

THE MEDIAN ACHIEVEMENT FOR EACH GROUP IN ENGLISH FOR GRADES 6-2 TO 12-2 INCLUSIVE

Grade	Junior High-School Group	Non-Junior High-School Group
	Percentage	Percentage
6-2	86.95	86.30
7-2	87.14	86.32
8-2	89.43	87.38
9-2	86.96	86.29
10-2	84.91	84.17
11-2	84.47	83.79
12-2	86.49	86.21
Average...	85.87	85.23

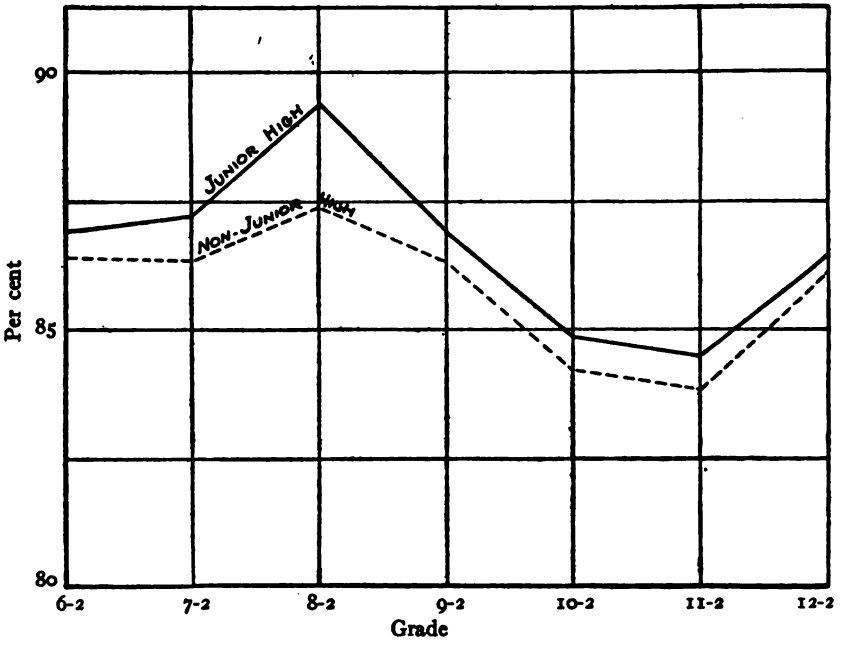


FIG. 3.—Median achievement of each group in English

Digitized by Google

Table VI and Fig. 4 showing the median achievement in mathematics are interesting and perplexing. In the sixth grade the two

TABLE VI

THE MEDIAN ACHIEVEMENT FOR EACH GROUP IN MATHEMATICS FOR GRADES 6-2 TO 12-2 INCLUSIVE

Grade	Junior High-School Group	Non-Junior High-School Group
	Percentage	Percentage
6-2	86.56	85.25
7-2	87.13	85.79
8-2	87.69	86.83
9-2	84.95	85.05
10-2	84.76	85.26
11-2	82.88	83.04
12-2	88.49	87.03
Average...	85.63	84.34

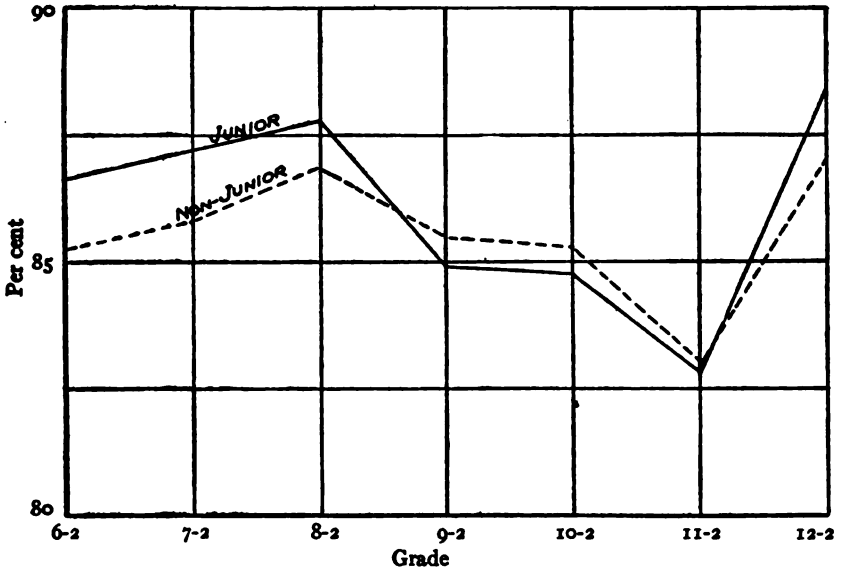


FIG. 4.—Median achievement of each group in mathematics

groups are almost in the same situation as they are in English. The junior high-school group has a slight advantage in mathematics of 1.3 per cent, while in English the advantage is only 0.6

Digitized by Google

per cent. In the seventh grade this advantage in mathematics is 2.6 per cent, but in the eighth grade only 0.8 per cent. However, while the group in English maintains a slight advantage over the non-junior high-school group throughout the seven years, the same group in mathematics is unable to do so. Apparently they are unable, as a group, to do as well in algebra as the section from the traditional school. The difference is not large, only 0.1 per cent, but the falling off from the median achievement in the eighth grade is 2.7 per cent, which is more than the loss of the non-junior high-school group, 1.8 per cent.

Through algebra and in geometry the non-junior group makes a slightly better median score. This is shown graphically in Fig. 4.

While the average median of the junior group in mathematics is 85.63 per cent and that of the non-junior group 84.34 per cent, the advantage is so slight as to make the achievement of the two groups almost identical.

SPECIFIC CONCLUSIONS FROM A STATISTICAL STUDY OF 404 STUDENTS DIVIDED NEARLY EQUALLY BETWEEN JUNIOR AND NON-JUNIOR HIGH-SCHOOL GROUPS

1. The two groups selected for this study are comparable groups. This is shown by the frequency distribution of each in mathematics and English. Grade 6-2 was chosen as the starting-point of this study, because in this grade it is assumed that each group receives instruction under a common form of organization.

2. The similarity between the distribution of the two sections in both English and mathematics does not change materially throughout the seven grades. In other words, the relationship which existed between them in Grade 6-2 remains practically unchanged.

3. The compactness of each group in English is shown by the quartile deviation. Table II indicates that the junior high-school group is more compact than the non-junior section. This may be explained by the fact that the latter group has a period of readjustment to new conditions which the former does not experience.

4. The quartile deviation for each group in mathematics indicates that the longer the junior high-school section takes that

Digitized by Google

subject the farther apart the students get in ability. On the other hand, the non-junior section maintains a very close and even relationship in mathematics.

5. A study of the median achievement of the two groups in English reveals the fact that neither has any advantage over the other. The average median for the junior high-school group in English is 85.63 per cent and for the non-junior group 84.34 per cent, a difference of only 1.3 per cent. This difference is hardly enough to constitute an argument for the intermediate school from the point of view of instruction in English.

6. An examination of the median achievement of the two groups in mathematics reveals the fact that the abilities of the two groups in that subject are almost identical. What small advantage there is is in favor of the non-junior group. As is the case with the subject of English, the work of the junior group in mathematics apparently furnishes no basis for an argument in behalf of the new type of organization.

7. In view of the foregoing, one is forced to the conclusion that the increased cost of the intermediate school in Grand Rapids from the point of view of instruction does not find its justification in better scholastic work in the senior high school. It is apparent that the work is done as well, but that the students are no better prepared to do the advanced work.

THE RELATION OF THE ACHIEVEMENT OF THE 404 PUPILS AND THE CURRICULUM IN THE INTERMEDIATE SCHOOL IN GRAND RAPIDS

With the facts just given, shall the conclusion be that the intermediate school in Grand Rapids, although it succeeds in the matter of increased enrolment and retention in school of the pupils enrolled, fails to prepare its students any better for the work of the senior high school than does the traditional elementary school? That such is apparently the case in this city is clear, but that the blame lies at the door of the intermediate school is not so evident.

The question at once arises, Has the junior high school been thoroughly reorganized as to the curriculum and the administration of the course of study? Or, in another way, do the students

Digitized by Google

in the intermediate schools have the same subject-matter presented to them as is given to the students in the elementary schools? If this is true, may not an explanation of the similarity in achievement and in distribution of the two groups be found in the answer to this question?

An examination of the curricula of the various junior high schools in Grand Rapids since they were organized in 1911 shows that there has been practically no change nor attempted change in the courses of study until the year 1915–16. In that year the course of study in English in the South High School was thoroughly revised, and this year a new course of study in history has been adopted for the same school. When the students whose records have just been studied were in the intermediate school, they followed the same course of study as those in the elementary school. Two important exceptions should be noted in the foregoing statement. In 1913 Latin and German were introduced as electives and were offered as additional subjects. This, so far as can be learned, is the extent to which the course has been revised up to 1915–16.

When it is considered that in the new type of organization the instruction in the seventh and eighth grades costs nearly $8.00 more per pupil, the expense, from that point of view, in Grand Rapids cannot be justified.

To put it in another way: it is not economical to spend an aggregate of $16.00 more per pupil for instruction to produce results which are obtainable for that much less.

Grand Rapids has been progressive in the organization and administration of the junior high school from the point of view of enrolment, and the results are very satisfactory. From the point of view of the reorganization of the curriculum, practically nothing has been done, and the results do not show progress.

SOME OF THE "INTANGIBLE VALUES" DERIVED FROM THE JUNIOR HIGH SCHOOL

Although the conclusions reached as to the scholastic ability of the junior high-school group in performing the senior high-school work do not seem to warrant the additional expense of the inter-

Digitized by Google

mediate schools, it does not follow that Grand Rapids is dissatisfied with the experiment. It is only fair to state that there are certain benefits arising from the junior high school which, in the estimation of the administration, more than warrant the increased expenditure.

Throughout this discussion, little mention has been made of the so-called "intangible values" arising from the junior high-school form of organization. The attempt has been made to confine the scope of the thesis to the "measurable qualities" of the intermediate school. In view, however, of the increased cost of the new form of organization, it may not be out of place to mention a few of the benefits which, while they are not subject to precise measurement, do, in the minds of many, justify the increased expenditure.

In Grand Rapids it is felt that the higher cost of instruction of the seventh- and eighth-graders is, aside from other considerations, justified upon the following grounds:

The period between the ages of thirteen and sixteen is the time when practically all the children enter upon adolescence. This tremendously important stage in the lives of the students is essentially a period of change. The boy becomes a youth, and the girl a maiden. They both experience an awakening of the emotions, they become self-assertive, they feel strong social attractions, they begin to think, vaguely perhaps, but none the less surely, in terms of their future vocations, and begin to realize something of their relation to the industrial world. Almost for the first time the students begin to ask the question, "Why?" about their school work. It is a period when they must be dealt with as individuals. The traditional scheme of a one-room-one-teacher form of organization with a common curriculum for all, which seemed to meet their needs during the first six years, no longer proves satisfactory. In short, the period of adolescence is the time of budding individuality.

The intermediate plan of organization gives the student an opportunity to develop and to express his individuality. Under the departmental plan of teaching he comes in contact with a greater number of teachers, with the result that he has at once a larger point of view than is possible under the traditional scheme.

Digitized by Google

He has also more men teachers, a most desirable thing for the growing boy and girl. His teachers are specialists in their line, and, as a rule, bring to the subject a breadth of view and give to the student an outlook upon that particular field not possible in any other way.

Again, the junior high school is so organized as to provide for promotion by subject rather than by grade. It is felt here that the benefits of this one change can hardly be overestimated. Nothing is more deadening than to repeat two or three subjects because a student has failed in one. It results either in "marking time" by the student or frequently in making him disgusted with the whole process of education. This leads the older pupils to drop out of school and causes the others to become rebellious and surly. Incidentally, it is a great waste of time. Promotion by subject rather than by grade has eliminated practically all of this feeling in Grand Rapids, and has, it is felt, retained many students who otherwise would have left. No statistics are available to prove this particular point, but it is subscribed to by all who have been engaged in the junior high-school work here.

Another of the "intangible values" which has operated to make the junior high school popular in Grand Rapids is that it tends to unify the school system. Children of the same age are, in general, grouped together. Pupils in the elementary schools and pupils in the six-year high school have certain interests in common. It was a frequent complaint that the older children of the elementary school had no common interests with the younger students and that they were not yet affiliated with the high school. As a consequence, little was or could be done to promote and guide the development of their social activities. From the experience in this city, where almost every form of organization is found, it is quite the consensus of opinion that for this particular purpose the three-year junior high school is the best. Under this plan both the younger children, with whom the junior high-school student has no common interest, and the older student, from whom, too often, he copies many bad traits, are eliminated.

It is also the verdict of those in the work here that one of the benefits derived from the newer type of school is the opportunity it gives for each one to develop, as far as possible, along the line of

Digitized by Google

his aptitudes, and, as a corollary of this, perhaps to discover some aptitudes which he did not know he possessed.

Indeed, this opportunity which the junior high-school type of organization offers for the adolescent boys and girls to "find" themselves constitutes, in the minds of many in Grand Rapids, its strongest argument. By means of what is known as the "rotating" plan, each boy must give a semester to the forge, to machine-shop, to wood-working, and to the electrical shop, or printing, and each girl a semester to millinery, dressmaking, and cooking previous to the ninth grade. Each student must then elect for one year one of the activities in which he or she has been prepared and in which special aptitude has been shown.

A GENERAL SUMMARY OF THIS STUDY OF THE JUNIOR HIGH SCHOOL IN GRAND RAPIDS

This study shows very clearly that Grand Rapids is one of the pioneers in the organization of intermediate or junior high schools. The fact that they were established here so early (1911) was due largely to the fortunate co-ordination of several factors. These seem to be: a superintendent who took advantage of the opportunity presented by the maturing of a building program at that particular time, a progressive board of education, and school patrons who were willing that such an experiment should be tried.

It is also evident from this study that the major portion of the reorganization has concerned itself with what was considered in 1911 to be the sole purpose of the junior high-school type of organization, the bridging over of the "gap" between the eighth and ninth grades, or the retention in school of the students for a longer period. The administration has also been active in opening new intermediate schools and in a gradual adoption for the whole city of the six-six or six-three plans. When it is considered that at present 57 per cent of all the seventh-, eighth-, and ninth-graders in the public schools are in the junior high schools, and that in 1915 86.3 per cent of the preceding eighth-grade class were in the ninth grade, and that there were 225 boys in the eighth-grade class in 1913 and 192 boys (85 per cent) in the succeeding ninth grade in 1914, it must be conceded that from this standpoint the results of the reorganization have been satisfactory.

Digitized by Google

The other fact which is no less evident is that the senior high-school graduates of 1916 who were prepared in the junior high school were no better trained than those who came from the elementary buildings.

It is evident, as the *Survey* points out,[1] that the reorganization of the secondary schools here has not been "carried far enough," and that "the most glaring faults of omission have to do with the curriculum and its administration." An examination of the curriculum reveals the fact that there has been practically no reorganization of the course of study, with the exception of the introduction of Latin and German and the added facilities for shopwork, since the establishment of the schools, until the year 1916.

In view of these facts it is logical to conclude that in Grand Rapids the junior high school will fully justify its increased cost, to put it in terms of money, only when it has been fully reorganized, not only as to its administration, but especially as to its curriculum.

The results of the statistical study of the scholastic records of the students prepared in the junior high school are disappointing, but they are by no means intended to indicate that the intermediate school in Grand Rapids is a failure, or that there have not been benefits derived from it which more than justify the increased cost. Among the values which might be mentioned are: the departmental plan of teaching, which broadens the horizon of the pupils; promotion by subject rather than by grade, and the consequent elimination of useless "repeating" and "marking time"; unification of the school system by grouping together students with the same common interests and points of view; and the providing of opportunity for students to "find" themselves.

It is true that the junior high schools in Grand Rapids have not been sufficiently organized as to their curricula, and that to function efficiently the course of study must be completely changed, but it is also true that the intermediate schools, although handicapped by an antiquated outline of work, have been able to render a real service to the community.

[1] *Grand Rapids School Survey*, p. 215.

Digitized by Google

EFFICIENCY IN ASSIMILATING READING

BERTHA M. SMITH
Oak Park High School

This problem is to test the relative efficiency in assimilation of what is read by experimenting upon pupils in the first year in high school.

The passage chosen for reading is a selection taken from Long's *English Literature*, page 487.

Dickens was the second | of eight poor children, | and was born | at Landport, | in 1812. | His father was a clerk | in a navy office. | He could never make both ends meet, | and after struggling with debts | in his native town | for many years, | moved to London | when Dickens was nine years old. | The debts still pursued him | and after two years | of misfortune | he was thrown into the poor-debtors's prison. | His wife then set up the famous Boarding Establishment | for Young Ladies; | but, in Dickens's words, | no young ladies ever came. | The only visitors were creditors, | and they were quite ferocious. |

At eleven years of age | the boy was taken out of school | and went to work | in the cellar | of a blacking factory. | At this time | he was, in his own words, | a "queer small boy," | who suffered as he worked. | It is a heartrending picture, | this sensitive child working | from dawn till dark | for a few pennies, | and associating with toughs | and waifs | in his brief intervals of labor; | but we can see in it the sources of that intimate knowledge of the hearts of the poor and outcast | which was soon to be reflected in literature | and to startle all England | by its appeal for sympathy. | A small legacy ended this wretchedness, | bringing the father from the prison | and sending the boy to Wellington House Academy, | —a worthless and brutal school, evidently, | whose head master was, in Dickens's words, | a most ignorant fellow | and a tyrant. | He learned little | at this place. |

When only fifteen years old, | he left the school | and again went to work, | this time as clerk | in a lawyer's office. | By night | he studied shorthand, | in order to fit himself to be a reporter, | —this in imitation of his father, | who was now engaged by a newspaper | to report the speeches | in Parliament. | Everything that Dickens attempted seems to have been done with vigor | and intensity, | and within two years | we find him reporting | important speeches, | and writing out his notes | as the heavy coach lurched | and rolled through the mud | of country roads | on its dark way | to London town. | It was largely

Digitized by Google

during this period | that he gained his extraordinary knowledge of inns | and stables | and "horsey" persons, | which is reflected in his novels. | He also grew ambitious, | and began to write | on his own account. | At the age of twenty-one | he dropped his first little sketch | "stealthily | with fear | and trembling, | into a dark letter-box, | in a dark office | up a dark court | in Fleet Street | ."

TABLE I

SHOWING THE NUMBER OF IDEAS GAINED BY EACH GROUP AND AVERAGE OF EACH GROUP

	PUPILS WITH FAILURES IN TWO STUDIES		PUPILS WITH FAILURES IN ONE STUDY		PUPILS WITH AVERAGE OF 85 PER CENT OR ABOVE	
	Boys	Girls	Boys	Girls	Boys	Girls
Number pupils examined	33	15	38	49	16	27
Total number of ideas	927	402	1,172	1,336	680	1,179
Average number of ideas	28.09	26.8	30.8	27.26	42.5	43.66

As will be noted by a study of the copy of the selection, all ideas are omitted that have to do with anything but facts of Dickens' life. The sentence in the second paragraph that contains "but we can see in it the sources of that intimate knowledge," etc., is the only sentence that impedes the progress of the narrative as a narrative. The experiment of reading this passage intensively for five minutes, and then of reproducing it, was tried upon six different groups of the first-year class of the Oak Park High School. The groups were selected according to the following classification:

First group: All boys who failed in two studies during January, 1916.

Second group: All girls who failed in two studies during January, 1916.

Third group: All boys who failed in one study in January, 1916.

Fourth group: All girls who failed in one study in January, 1916.

Fifth group: All boys who made an average of 85 per cent or above for the semester ending January, 1916.

Sixth group: All girls who made an average of 85 per cent or above for the semester ending January, 1916.

In every instance the test was given at about three o'clock in the afternoon after the day's work in school. The instructor gave

Digitized by Google

each group the same explicit directions as to procedure. It was impressed upon the pupils that they should concentrate intensely for five minutes upon the work that was upon the sheets of paper turned face downward upon the desks at which they sat. At a given signal all were to turn the papers and read. Then at another signal, at the end of the five minutes, they were to write what they had read, not aiming to reproduce the exact words of the passage, but to give the ideas or facts related.

Every subject was given as much time as he wanted in which to do the writing.

The method of dividing the sentences of the selection into units or ideas was followed by the instructor. By consulting the copy of the passage read, it will be noted that it is estimated that the selection contains ninety-two ideas.

Table II shows that in the case of the boys with two failures over half of them were able to get only from 25 to 35 ideas; while in the case of the girls with two failures approximately half of them could not get beyond the range of 25 ideas. Of the 33 boys, only four were able to gain more than 35 ideas; of the 15 girls, four likewise went above the 35 mark.

Of the 38 boys with one failure, 14 ranged from the 20 to the 30 mark, while 13 gained more than 35 ideas. Of the 49 girls, 29 are found between the limits of 20 and 30, while only ten went beyond the 35 mark.

Of the 16 boys with an average of 85 per cent or above, 11 are beyond the mark of 35 ideas; of the 27 girls with the 85 average, 21 are beyond the mark of 35.

It is interesting to note that the starting-point, or lowest number of ideas made by the boys and girls of the 85 per cent average, varies only three or four points from the average number of ideas made by the boys and girls with two failures; and that the average number of ideas gained by the boys and girls with 85 per cent average varies only two or three points from the highest number of ideas gained by the boys and girls with two failures.

At first glance it would seem surprising for a boy failing in one study to gain 70 ideas. Only one student took the test twice, and that was the boy with the 70 ideas to his credit in the group of boys

Digitized by Google

TABLE II

SHOWING THE VARIATION IN THE ASSIMILATION OF IDEAS ACCORDING TO THE INDIVIDUAL PUPILS

Ideas Gained by Pupils with Failures in Two Studies				Ideas Gained by Pupils with Failures in One Study				Ideas Gained by Pupils with Average of 85 Per Cent or Above			
Boys		Girls		Boys		Girls		Boys		Girls	
No. of Boys	No. of Ideas	No. of Girls	No. of Ideas	No. of Boys	No. of Ideas	No. of Girls	No. of Ideas	No. of Boys	No. of Ideas	No. of Girls	No. of deas
						1	9				
						1	10				
						1	11				
				1	14						
1	15	1	15	2	15						
1	16	1	16	1	16	1	16				
1	17	1	17	1	17						
				1	19	1	19				
1	20	1	20	3	20	3	20				
1	21	1	21	1	21	3	21				
2	22	3	22								
3	23			2	23	7	23			1	23
1	24			3	24	2	24	1	24		
1	25	1	25	1	25	2	25				
				1	26	3	26				
5	27					5	27	2	27		
2	28									1	28
		1	29	2	29	2	29			1	29
2	30			1	30	2	30			1	30
1	31			2	31			2	31		
3	32	1	32	2	32	3	32				
2	33					1	33			1	33
2	34									1	34
				1	35	1	35				
		1	36			2	36	1	36	1	36
1	37			2	37	3	37	1	37		
1	38			1	38					1	38
		2	39	3	39	2	39				
						1	40	3	40	1	40
				2	41					1	41
				1	42					1	42
				1	43					1	44
2	45										
						1	46			5	46
		1	47							1	47
						1	50	1	50	2	50
										1	51
				1	54					1	54
										2	55
								2	56		
				1	57						
								2	58	2	58
										1	63
				1	70			1	69		

Digitized by Google

with one failure and with the 69 ideas in the group of boys with an average of 85 per cent or above. Through carelessness he had failed in one study in January, but still had an average of more than 85 per cent for the semester. Inasmuch as the group with the high average took the test last, he gained nothing by his additional five minutes of study, but lost one point.

The following are some of the most glaring of the errors made by those of the different groups.

I. ERRORS MADE BY BOYS WITH TWO FAILURES

"At night he took Shorthand. At about this time he thought of writing poetry."

"He went to a small acadimy where he said the teacher was a pirote." [The spelling is the pupil's.]

"He went to work in a lawyer's office. He afterwards became a lawyer." [Note: This is the closing of one of the papers.]

"Dickens got a job in a livery stable and while the coach rolled along he would write poems about the horses and at the age of twenty-one he dropped a poem of a letter box in Fleet Street."

"Dickens was thrown in a debtor's prison. At the age of eleven he was taken out and put to work in the cellar of a tar factory."

"At the age of twenty-one, he grew ambitious and began to write poems and in this same year he had his first poem published."

II. ERRORS MADE BY GIRLS WITH TWO FAILURES

"England's sympathy brought his father out of the cell."

"Dickens went to work in a blacksmith's cellar where he learned quite a bit about the stables and horses."

"After Dickens began to work, things went better and he was soon making speeches."

III. ERRORS OF BOYS WITH ONE FAILURE

"Dickens often imitated speeches while he rode in the coach."

"When he was fifteen, he quit school and began working in a livery stable."

"His father became great in Parliament."

"Dickens was getting some ambition and he saw some of the world and he knew what a stable was."

"When eight years of age he was put in prison."

"He wrote his first story and put it into a very dirty box in a very dirty street when he was twenty-one."

"He soon made an appeal to the English people and made enough money in this way to get his father out of prison. He wrote many interesting novels

Digitized by Google

in his career. Among them was about taking a letter up a dark street to drop in a dark box."

IV. ERRORS OF GIRLS WITH ONE FAILURE

"He used to write notes on his way to and from Paris."

"When he put his first book in the mail box he put it in with a sigh of relief, but never dreamed it would be published."

"The familty to which he belonged lived in Massachusetts. The town in which Dickens went to school was an academy for girls but they did not seem to pay any attention to Dickens or any of his classmates."

"His father made the speeches for Parliament and Dickens took the notes."

V. ERRORS OF BOYS WITH AN AVERAGE OF 85 PER CENT OR ABOVE

Of these few made mistakes. What they wrote for the most part was correct. They did not do "guess work." If they could not remember, they left out the material. The following were the worst mistakes found:

"For a while he worked in a stable where he got his knowledge of "horsey things"."

"Dickens was sent to a military academy."

"When he was a young man he wrote literature. The name of this piece was "Stealthily." [This error is understandable when the selection is scrutinized.]

VI. ERRORS OF GIRLS WITH AN AVERAGE OF 85 PER CENT OR ABOVE

"Creeping stealthily to the black mail box on *Quick* Street."

"Dropped his first epistle with a quaking heart into a dark letter box on a dark *corner* in a dark street."

"Dickens was sent to a very strict academy for boys."

"In the basement of a boot blacking shop!"

An experiment of this sort is only further evidence of the differentiation of the minds of pupils. It only tends to verify the judgments the teachers had already rendered by means of the school's grading system. Furthermore, the teachers in consultation after the first two or three weeks of school in September had questioned what should be done with many of these pupils, who later were subjected to this test in that they had failed in part of their school work. Their teachers, in a good share of the cases, knew very soon after the beginning of the school year that these pupils were not mentally equal to the school tasks as now assigned.

Digitized by Google

Aside from a few removals, most of the pupils, however, continued in their courses to the end of the semester, even though their work was not up to the accepted standard.

The question arises after a scrutiny of the results of this test, whether there is not a fundamental difference between the type of mind exhibited by those listed as failures and the type of mind shown by those with the 85 per cent average. The conditions of the test were the same, yet the results were comparatively in accordance with the kind of classroom work done by each. If these types of mind are not different, then it is the training processes through the various grades that have failed to register the same results. The contentions are that variations in pupils do exist and that the pupils should be studied with closer attention as to what these variations are; and that the training processes, by lack of drill differentiated to suit the need of the individual pupil, have fallen short of achieving their purposes.

Business houses more and more are engaging experts to study their men employed to see that the right man is in the right place. It is becoming, or has become, only a matter of good business to do this. In the school world such business tactics applied to the fitting of boys and girls to the right courses, and to the creating of courses for the right boys and girls, would help to minimize the present uneconomic loss in secondary education. The wholesale apportionment of pupils to a few limited courses refutes the idea that this is actually done.

But it is not merely the placing of the pupil in the proper place for him that constitutes the problem. Good business undertakes to find the resources and limitations of its employed and to develop what it discovers, intelligently and systematically. Theoretically, educators do this, too. In actuality, however, if pupils cannot keep up with the standardized pace in the few courses now offered, then they must repeat these courses, or else sever their relations with the school. Such conditions exist in practically every school.

If pupils in the first year of high school cannot read a simple narrative in English such as was used in this test without making extremely gross errors, it is very plain why there are so many failures in the course in English as it is now given. Furthermore,

Digitized by Google

how can these pupils be expected to combine and recombine properly the grammar forms in other languages, such as Latin and German? The same holds true of algebra and general science. A mind that jumps at conclusions and wildly leaps into expression with small regard for accuracy and truth has little taste for the laws of sequence and reason. Then why not regard it as a fact that such minds do exist, and begin to build with the foundations they already have, and not with the foundations the present acceptable type of student possesses?

Observation of the manner of each pupil in his method of attacking the problem was of interest to the experimenter. The pupils with failures approached this test in a different attitude from that of the good students. With the latter it had the appearance of an adventure. What it was for they did not know, but they went at it with zest. Their concentration was marked. Only one of the 85 per cent group looked up before the signal was given to stop. On the other hand, when the groups of "failures" were examined, the pupils showed a restlessness in less than four minutes and seemed to indicate that they were ready to write. They lacked application, and consequently the results were poor.

To say they lacked application is easy, but what is behind that lack? It is evident that their understanding of simple English is poor and haphazard. It may be argued in answer to this that their interest did not "connect up" with what was being read, and, as a result, they reacted with the long-standing habit of listlessness of mind toward what seemed uninteresting. It is true that in consultation with these pupils in regard to the unsatisfactory condition of their work they often assigned the reason "I'm not interested." But for pupils, though they may not be interested, to have formed habits so that such inaccuracies can be made strengthens one's belief in the need of investigation into the ways and means of the injection of subject-matter into the pupil's mind.

The teacher taking too much for granted has, no doubt, caused many a pupil to go beyond his depth. If tests were to be devised that would show what kind of mind the pupil has and, in some measure, its capabilities; then if courses were arranged in the curriculum that would take care of these variable types, and would

Digitized by Google

begin with them where their abilities begin, not so many pupils would complain, "I'm not interested." At present the good, the poor, the indifferent, are grouped in the same classroom. Much of the instruction is below what the strong pupil needs, and much of it is above the weak pupil. To strike a so-called happy medium, in this instance, is not sound pedagogy.

Too long has it been taken for granted that the slower pupils should have "equal opportunity" with the quick pupils—"equal opportunities" meaning "same opportunities." The time element enters into the problem, for the quick pupils in the five minutes of time had stored in their minds many more ideas, and more accurate ones, than the slower pupils had. Then how can these two classes of pupils be taught upon the same basis? A glance at the few errors made by the pupils with 85 per cent average will show that these errors are explicable. In almost every instance the law of analogy, or of association, or of synonymy, can be traced in the mistakes. But no such excuses can be found for many of the wrong ideas expressed by the slower pupils. Theirs seems to be a fundamental difficulty. Why try to lead them farther into the realms of abstraction and complex visualization when as yet the basic elements of these two have not been grasped by them?

According to the test, those who do well in their regular school work have application and concentration; those who do poorly in their daily routine of studies lack both these qualities. At least this is true of these groups examined. Perhaps the stress too long has been upon the getting of results without the careful study of the scientific means to get these results. It is said that "with brains, sir," was the reply which Dürer, the famous painter, used to give when his pupils asked him how to attain a certain effect in a picture. The modern teacher cannot be so haughty and final in his answer; he must show his pupils *how* to *use* "brains" before he attacks too strenuously the results put before him.

Digitized by Google

SUPERVISED STUDY AND THE SCIENCE LABORATORY

ELLIOT R. DOWNING
University of Chicago

The laboratory as an educational accessory is a relatively recent affair. The first chemical laboratory—probably the first laboratory open to students—was that of Liebig at Giessen established shortly after 1824. Harvard University opened its first laboratory for students in 1846. The laboratory appeared as an adjunct of the high school less than a half-century since, and even yet it is by no means in universal use.

The advantages that have been claimed for the laboratory method in science instruction are many:

1. It affords opportunity for first-hand contact with materials and processes and thus leaves concepts in the mind of the pupil that are much more accurate and clear-cut than can be attained by information won from descriptions and pictures. What a revelation, for instance, are active, living cells like amoebae to the student who has formed his preconception of such objects from his reading only.

2. It imparts information in a very effective way, so that the pupil retains the knowledge much better than when he acquires it by other methods of instruction.

3. It gives opportunity for a very complete type of reflective thinking in solving problems. The student may collect his own facts, devise his own hypotheses, test them out, and form his own judgment. Drill in this sort of thing tends to develop good habits of scientific thinking and ideals of its practicability and applicability to all situations, together with self-reliance in the formulation of opinions. Good types of the solution of a problem by reflective thinking are familiar in such things as Pasteur's successful attempt to avert the menace of the silk-work disease, or the modern physicist's revelations concerning the nature of radium.

Digitized by Google

4. It is a psychologically correct method, taking advantage of the pupil's instinctive curiosity and his inherent activity to arouse native interests and hold attention by manual and sensory effort so as to carry over into sustained, acquired interest, and a will to grasp the more fundamental concepts and principles.

5. It may develop a very desirable type of skill. This is a relatively unimportant factor in the high-school scientific studies. The medical school illustrates it in the skill it imparts to the embryo physician in the dissecting-room, the engineering school in the skill it gives in the analytical laboratories. The high-school shop is a type of laboratory that does give a serviceable skill to the high-school pupil.

These and other things have been stressed as the chief ends to be achieved in laboratory work, possibly these are the most important. It is needless to inquire which one is the most essential; all are worth while, all may be achieved.

Teachers of science have not been slow to see that the adoption of the laboratory method does not of necessity insure good teaching. Indeed, the multiplication of apparatus and the consequent added responsibility of its successful care and administration often make the laboratory a handicap to a fairly successful instructor. To relieve the teacher of the added burden and to enable him to supervise the work of large laboratory sections, resort has been had to various devices, notably the laboratory assistant and the laboratory guide. Certain considerations will make apparent the dangers accruing from these substitutes for the personal guidance of the teacher.

Laboratory work is essentially supervised study. It is interesting to note that as supervised study is introduced as a feature of other subjects in the high schools the periods are quite invariably lengthened, often doubled, so as to allow the teacher time to give that individual attention so essential to the success of the method. Moreover, there appear, almost certainly, directions and outlines for study, quite comparable to those of the scientific laboratory which have so often formalized and deadened the laboratory work that in many cases a return to the lecture-demonstration method would be a vast improvement.

Digitized by Google

As long as it is conceived that the chief function of the laboratory is to bring the student in contact with concrete material, then a laboratory assistant with sufficient intelligence to set things out and put them away in an orderly fashion and printed directions for the manipulation of the apparatus are adequate.

If information is the end sought, the laboratory guide may be sufficient to state the facts and principles, and the assistant, with its aid, may direct the process of their verification. It is to be noted that the laboratory method of acquiring information is very wasteful of time. It is justifiable only when the concepts involved are new and need clarifying by contact with the materials or occasionally when an important principle may be simply demonstrated by the student's experimentation. Most information, if the student really has need for it, is most economically acquired either from books or from lectures.

But when we conceive of the laboratory as a place where real problems are discovered and solved in order that the pupil may be habituated to proper methods of reflective thinking, where ideals may be established so that the scientific attitude of mind will carry over into life's problems outside the laboratory, then it is evident that nothing must come between the nascent mind of the pupil and the contagious and enthusiastic ability of the teacher.

This aim of science instruction is one of the most fundamental in democracy—to habituate pupils to reason to correct conclusions on the basis of observed fact rather than to hold opinions based on whims, fancy, myths, and prejudice. The best feature of the laboratory is, therefore, the opportunity it affords for the intimate give and take between pupil and teacher, when the teacher can supervise the steps in the student's thinking, see that they are logical, criticize errors, stimulate enthusiasm, and the student can ask for assistance at the points where he finds himself floundering. This is so essential, in secondary-school work at least, that the wise teacher prizes highly his chances for this sort of supervised study, and even in the advanced work of college or university, where the information aim is much more important, the wide-awake student finds fault if he is turned over to the inexperience of the laboratory assistant.

Digitized by Google

Drill in productive thinking can be accomplished only when the work is presented in problem form. A problem is the only justification for contact with materials and absorption of knowledge. When the pupil can be started on a problem that seems real to him, he is positively chemotropic for relevant facts and has a keen appetite for all knowledge that has a bearing on its solution. Observation for observation's sake is inane and worthless; an accumulation of fact is a rubbish heap unless assimilated to nourish some growing idea.

Briefly, then, efficient laboratory work deals with commonplace materials that have direct economic and social values and inherent interest for the pupil. It directs observation toward the accumulation of the facts in order that some problems vital to the pupil and therefore socially worth while may be solved. It aims to habituate the pupil to solve problems under wise supervision by reflective thinking on a basis of observed fact, to establish an ideal of the scientific method of attack on problems, and to carry the method over into related questions that concern the boy and girl. It tries to equip the immature mind with the problem-seeing, problem-solving attitude of mind as a permanent tool of inquiry.

Laboratory work must needs begin with simple problems well within the pupil's comprehension, and with *his* problems, not some propounded to him. The organization of science instruction must be from the point of view of the pupil, not from that of a specialist. The scientist has been slow to recognize that there is a possible science of the pedagogy of science; possible, I say, for it is still largely a field for investigation, although substantial beginnings have been made.

Laboratory work must be so organized as to increase in difficulty as the pupil increases in mental power. We need some "scale of hardness" to test out the difficulty of topics in all our high-school sciences and to give us some really scientific data on the subject, to replace our a priori conception of what the pupil ought to find easy. In fact, the records of failures in final examinations and of failures in college-entrance examinations would seem to indicate that we have no notion, even a hazy one, regarding the scientific problems that are within the grasp of the average high-school pupil.

Digitized by Google

But there is another element to be considered in estimating the difficulty of a course besides the inherent difficulty of the prescribed subject-matter—that of the manner of presentation. In laboratory work this is as a rule hopelessly monotonous, and often it entirely ignores the essence of the whole thing, the problem type of organization. The experiment is set out for the student with no statement of the problem to be solved, often with directions so formulated that the results are implied, hence giving no opportunity for the student to gain in problem-solving power. An experiment is not an experiment unless it aims at the settlement of a dubious point. Most so-called experiments are demonstrations. The laboratory guide is prone to become a receipt book, and the teaching based upon it has been dubbed "the cook-book style." It scarcely deserves the appellation, for it even lacks the satisfaction of an edible product. This does not imply that all of the subject-matter must be presented in problem form. Much may be given as textbook work to be learned; much by lecture and demonstration; much drawn from the previous experience of the pupil, now merely to be reorganized for present purposes. But some of the work should be in problem form for the avowed purpose of giving drill in problem solution. Such problems should be real problems, and the solution should not be written across the face.

The average textbook or laboratory guide presents its problems in a stereotyped way that decreases rather than increases the pupil's self-reliance. The formula is monotonously the same from start to finish:

Statement of problem
Apparatus supplied
Directions for proceeding
Results obtained
Conclusions to be drawn

It would be a marked improvement gradually to cut out the props, helping the pupil generously at first to take the successive steps, all of which are difficult, and then gradually teach him to "go it alone" until he is given some problems to solve unaided, and finally is called on to make a survey of material, in order to find, define,

Digitized by Google

and solve his own problems. This is no chimerical fancy; it is actually being done in some of the best high-school teaching.

SELECTED BIBLIOGRAPHY

1. Bigelow, S. Lawrence. "The Growth of the Modern Laboratory," *Science* (N.S.) XIX (April 22, 1904), 641–50.
2. Caldwell, Otis W. "The Laboratory Method and High School Efficiency," *Popular Science Monthly*, LXXXII, 243–51.
3. Dewing, A. S. "Science Teaching and the Laboratory Method," *School Science and Mathematics*, VIII (December, 1908), 740–44.
4. Galloway, T. W. "An Appreciation of the Pedagogical Possibilities of the Biology Laboratory," *ibid.*, VIII (1908), 116–25.
5. Goddard, H. N. "Laboratory Teaching," *ibid.*, XVI (1906), 710–19.
6. Hall-Quest, A. L. "How to Supervise the Study of Science." *Supervised Study* (1916), chap. xiii.
7. Judd, H. C. *Psychology of High School Subjects* (1915), pp. 338–39.
8. Lloyd and Bigelow. *The Laboratory, Its Equipment, Method for Study and for Demonstration*, chap. ix in Part I, "The Teaching of Biology," pp. 209–28; *ibid.*, chap. iii in Part II, "The Laboratory and the Scientific Method in the Teaching of Zoölogy in the Secondary School," pp. 294–319.
9. Mann, C. R. *The Laboratory Work. The Teaching of Physics* (1912), chap. xi, pp. 246–69.
10. Mayman, J. Edward. "Teaching Elementary Science in Elementary Schools," Dept. of Education, City of New York, Div. Reference and Research, *Publ. 13*, 1915, "The Laboratory Method," pp. 23–30.
11. Newell, L. C. "More Profitable High-School Chemistry," *School Review* (May, 1901), ix, 286–97.
12. Parker, S. C. "Laboratory Methods," pp. 449–64. *Methods of Teaching in High Schools*, chap. xix.
13. Roberts, H. F. "The Relation of Class to Laboratory Work in Biology," *School Science and Mathematics*, XIV (1914), 467–72.
14. Smith and Hall. *The Teaching of Physics and Chemistry* (1913), chap. iv, pp. 87–127.

Digitized by Google

THE JUNIOR HIGH SCHOOL

DESCRIPTION OF THE LOCAL SITUATION IN HANNIBAL, MISSOURI

L. McCARTNEY
Hannibal, Missouri

Among the most important reasons leading the school authorities of Hannibal to adopt the junior high-school idea may be mentioned: (1) a strong local recognition of the fact that many of the pupils were not getting the kind of training in the higher elementary grades that they most needed; (2) the failure of the work in these grades to make an appeal to the pupils who came from homes where they were not supported by a strong educational tradition and sentiment; (3) the difficulty experienced by students in accomplishing the work of the first high-school year; and (4) the belief that the majority of pupils found in Grades VII, VIII, and IX when taken collectively constitute a natural psychological unit requiring treatment essentially different from that above or below these limits.

Based on these considerations action was taken establishing two junior high schools in September, 1915; and in one other school the work of Grades VII and VIII was departmentalized and was given some of the characteristics of junior high schools. At a later date it is expected to make this school the third junior high school in the city system. In this connection it should be said that the changes in our system have been gradual rather than abrupt; and some of the features of junior high-school life, as usually recognized, were found in our schools before September, 1915. All schools containing seventh and eighth grades had been equipped for laboratory and shop work in manual training in wood and in household arts, and all pupils in the grades named were receiving regular training in those forms of educational activity. The instruction in these subjects was departmentalized; and some progress had been made in departmentalization in other work. In one of the three schools now under discussion the departmental plan of teaching had been

Digitized by Google

quite definitely worked out in all major subjects. In addition to these three larger elementary schools here described in brief, we had the smaller elementary schools, and these on account of location were organized either on the six-grade limit or less. These smaller schools were tributary to the larger schools for Grades VII and VIII, and all were tributary to the one central high school giving the work of Grades IX to XII inclusive. From this statement of the local situation it will be seen that the setting of a definite time when the junior high school was first formed in Hannibal will depend upon one's definition of a junior high school. We have selected September, 1915, as the date most nearly marking the time when our schools took on the characteristics that we believe to be the essential features of this school. At that time we not only changed the form of the organization, but also made certain modifications in the course of study that will be described more fully below.

In the two junior high schools already formed we have sixteen teachers and approximately four hundred pupils. One of these schools is about twice the size of the other, but both have the same standing in the school system and both offer their pupils the same scope of work. The details may differ, if the local needs of one school appear to be unlike those of the other. All teaching is departmentalized, and some elective work is offered in Grades VIII and IX. This work will be set forth more in detail in a paragraph treating of the course of study.

Our junior high schools are housed in the same buildings with elementary grades (I to VI), and the junior high school in each case is under the same principal as the corresponding elementary school. This is not a temporary device with us, but we believe that it is the plan best suited to give the results desired. Our purpose in taking the ninth grade to more than one location in the city is to bring the work of that grade close to the homes of the pupils and thereby bring about a unification of the junior high-school work in each part of the city, where it can make its own direct appeal. Results are justifying this view, if any conclusion can be drawn from so short a period as ours has been. The opposite course of procedure would be to withdraw the work of Grades VII and VIII from the immediate home neighborhoods of the pupils and

Digitized by Google

concentrate that work in centers more or less remote. This would have a tendency to create a gap between the work of the first six grades and the junior high school, and would constitute a new and unnecessary danger.

Similar reasons influence us in the plan of giving one principal charge of a junior high school and the elementary school found in the same building. A principal so situated is enabled to work out many problems dependent upon the interrelation of the two types of school and to make the school training of the individual pupil continuous and consistent to needs. The junior high-school organization within a building is distinct and constitutes a unit apart from the elementary grades, having its own part of the building, its own form of class organization for departmental instruction, and in fact all the characteristics of a separate organization. As we have some buildings containing both junior high schools and elementary schools and other buildings containing only the elementary schools of six grades, we shall be able to make a limited comparative study of some features of the two plans of housing. This is an interesting line of study of the relation of the junior high school to the elementary school.

In making the course of study for junior high schools we have proceeded gradually rather than by an abrupt and radical readjustment. A statement of the changes in the course of study, then, will be most helpful if divided into two points: (1) the work as it now stands; and (2) the further modifications to which we are looking forward.

Three principal considerations have been kept in mind in modifications that have been made. These are (1) the elimination of topics and parts of subjects that had lost such usefulness as they ever possessed for pupils of the adolescent age; (2) the introduction of some work at a time earlier in the course than had been previously set; and (3) the introduction of elective studies as low as Grade VIII. Among the topics and parts of subjects of study eliminated from the course may be mentioned some of the intricate work in technical English grammar, the topics in arithmetic not readily related to the life-experience of pupils in the junior high-school grades or not now in general use in business, and the older forms of presenting history

Digitized by Google

and civics in these grades. Condensation was also brought about by grouping such subjects as reading, writing, and spelling under the head of English, and making two general kinds of English instruction—the expressional and the literary or appreciative.

Commercial arithmetic, which had previously been presented in the ninth grade, was placed in the eighth grade. It now constitutes together with business English the first part of the commercial courses in the junior and senior high schools. Latin, previously offered for the first time in the ninth grade, is an elective in the higher eighth grade. Algebra is made part of the course in the latter half of the eighth grade and continued in the ninth. A student may omit algebra, but if he does so he will be required to take plane geometry in the senior high school if he enters that school. While we have reduced the importance of algebra, we have not made the study of mathematics entirely elective in both junior and senior high-school courses. Students expecting to take certain courses in the senior high school are expected to take algebra in the junior high schools.

As has been stated in an earlier paragraph, our schools had been provided with equipment in manual training and home economics in Grades VII and VIII, and all pupils in those grades were receiving regular training in those subjects before the junior high-school plan was adopted. This work is now a part of the junior high-school course. As the courses offered are general in character and suited to the needs of all adolescent pupils, the work is not placed in the list of elective subjects, but is required of all. It is of a prevocational nature for such as may later take definite vocational training in these subjects, but for other pupils it is a training for life in a broader sense and for home-making in a definite sense.

General science is offered as an elective in the ninth grade. The course is planned to be non-technical and to be presented in terms intelligible to pupils of that grade. The work as presented requires mostly such apparatus as can be improvised in the school shops under the direction of the teacher. A few pieces of standard apparatus are desirable, and these can be taken temporarily from the senior high school if not available for permanent use in the junior

Digitized by Google

high-school laboratory equipment. This point has presented no very serious difficulty in our work.

With such modifications as have been indicated, the course of study is an outgrowth of the course that had previously been in use in Grades VII, VIII, and IX. Four principal lines of work prevail: the work in English with a reduction in the requirement in English grammar for pupils who take Latin; the work in mathematics consisting of arithmetic and algebra with a special treatment of commercial arithmetic in the eighth grade; the work in geography, history, and government; and the course in general science preceded by physiology in the eighth grade. Minor work is also given in music and drawing. The courses in manual training and home economics already described complete the outline as it now stands.

In our further study of the problem of the modification of the course of study we plan to introduce more vocational work by increasing the commercial subjects offered, and to modify the manual training by the introduction of some form of vocational work. The exact nature of these changes cannot now be known. An additional subject of investigation in this connection is the matter of introducing one of the modern languages in the grades below the ninth as an elective. We consider these changes desirable, but on account of our financial limitations we have not been able to take them up as early as some of the items mentioned.

In the selection of teachers for the junior high schools we have aimed to establish a standard based on (1) special success in dealing with pupils of the adolescent age as shown by previous experience as teachers, and (2) not less than two years of student work of college grade pursued under conditions where the professional phase of teaching was predominant. In first choosing the teachers for the junior high schools we took those in our own schools who came nearest to the realization of this standard, and supplemented the number by electing new teachers who met the standard of scholarship, although they had not the experience to indicate special success in higher grade work. In such cases we could be guided only by the probable success of the prospective teacher as indicated by qualities of character. In dealing with teachers in our own corps, who were chosen for this work because of special success but

Digitized by Google

did not fully reach the standard of scholarship, we have tried to hold out inducements to complete the requirements by working in summer schools. In this connection I wish to say that our teachers are all earnestly working toward the attainment of the standard.

In selecting teachers for junior high schools the principle need is to find teachers who have a vision of the real junior high-school problems. At the present time it is very doubtful whether young graduates of four-year college courses can be found who have this vision. They have been too busy as students of strictly academic subjects to have had much experience in teaching in the higher grades of elementary schools; and if their college work has been in an institution where the professional phase of teaching is not the predominant element, it is not probable that their training has developed junior high-school aims. They are better suited to get their first experience as teachers in a senior high school than in a junior high school. Even those young teachers who come from institutions where the professional phase of education is predominant, are likely to need considerable readjustment before they can be truly efficient. Altogether we have found that the best type of teacher for these schools is the teacher who has already shown marked fitness for dealing with adolescent pupils and who also has the college training or will get it as rapidly as circumstances permit.

Among the benefits that we have already been able to see resulting from the organization of junior high schools in our city, I may mention the strong spirit of unity shown in each junior high-school group. My observation is that the relation of the seventh, eighth, and ninth grades to one another is much closer than the relation of the ninth grade to the grades above it. This judgment is based on observation of both plans of grouping. A direct result of this regrouping is also noticeable in the senior high school, where the students now constitute more truly a company of secondary students of one general type.

Individual success in the work of the ninth grade is one of the marked results of this reorganization. Our ninth-grade pupils are not now showing the strong tendency to break down in the quality of their work that was formerly shown. While there are still many

Digitized by Google

who have some difficulty, the tendency toward a higher standard of success is very plain.

We are also experiencing a strong tendency to make certain special and definite requirements of the six grades in the elementary schools, as constituting the kind of work peculiarly suited to be accomplished in those schools. While our plan of promotion is flexible and will permit the real interests of the individual to be served in all these grades, the scope of work attempted is growing more definite and the standard of measurement of results is growing more specific. From this it will be seen that the beneficial results of junior high-school organization are manifesting themselves in the entire system of schools.

Digitized by Google

THE SUPERVISION OF EXTRA-CURRICULAR ACTIVITIES

ELMER HARRISON WILDS
State Normal School, Platteville, Wisconsin

The following investigation was made with the purpose in view of devising a method for the supervision of extra-curricular activities in the high school that could be applied universally to all types and sizes of high schools and solve the many evils connected with the administration of the manifold forms of these activities as found in our schools. Three sources of material were used in this investigation: (1) the literature on this phase of school administration; (2) reports by school principals on question blanks submitted at random to a large number of high schools; (3) reports in the form of personal letters from a number of principals who were known to be interested in this phase of high-school administration.

From the literature, especially from the *Proceedings of the National Education Association* and various school journals, were obtained descriptions of many pioneer experiments in the supervision of extra-curricular activities. From the question-blank reports it was possible to determine statistically such questions as (1) the extent of extra-curricular activities in the schools, (2) the evils that exist in connection with these activities, and (3) the various types of administration that are being used. Personal letters were written to a number of high-school principals who were known to have an active interest in the problem or to have recently inaugurated new schemes of administration. From this source came many descriptions of recent experiments. As a result of this investigation, it was found possible to devise and put into operation the plan of supervision described in this article, a plan which I am convinced can be used as the basis of a well-organized, standardized scheme of supervision, adaptable to all schools.

It is impossible to reproduce in this article the details of the statistical results of the investigation. A few general conclusions,

Digitized by Google

however, may be noted, especially with regard to the extent of extra-curricular activities and to the prevalence of evils in connection with them.

1. Of the schools reporting, 13 were large schools, with a median enrolment of 1,220 and a median number of teachers, 54; 50 were small schools, the median enrolment being 207 and the median number of teachers, 10. Yet it is significant to note that there is little difference between these two groups of schools with regard to the number of activities, the median number of activities being 15.7 for the large schools and 13.5 for the small schools. When one realizes that it takes as many students, as a rule, for each form of activity in the small school as in the large school, and as many teachers to control them properly under the present system of administration, one can readily see the main reason for the prevalence of evils as found. The remedy must be either to cut down the number of activities or to formulate a new scheme of administration. Since these activities are all of such great educational value, the latter is the remedy to be applied.

2. In all the schools there is a tendency to stress certain forms of activities at the expense of others equally important. The older forms of activities are engaged in and stressed at the expense of newer forms that really have as much or more educational value for the pupils.

3. Evils were found to be much less prevalent in schools where some attempt was being made to adopt new methods of supervision. This shows that the evils can be remedied by intelligent efforts at correct supervision.

4. The following evils were found to exist to a greater or less degree in the various schools:

Duplication of activities by different organizations
Excessive expenditures of money by organizations and by individuals
Duplicated purchases by different organizations
Waste of supplies and equipment
Conflicts in scheduling dates for events
Interference by out-of-school organizations
Limitations in number of students participating
Overloading of work upon a few students
Neglect of curricular work for extra-curricular activities

Digitized by Google

Lack of centralized authority
Too much burden upon principal
Difficulty of securing teachers capable or willing to supervise
Lack of adequate faculty supervision
Lack of means for compensating teachers for such supervision
Development of cliques and small partisan groups

5. The evils that predominate are those connected with participation. Overloading and consequent neglect of curricular work is most common. An average of 15.5 per cent take part in more than three forms of activities. Only four schools report attempts at restricting participation. There is also a great limitation in participation shown. An average of 29.2 per cent is reported as taking part in no form of activity. The second commonest type of problem is the difficulty of securing teachers capable or willing to act as sponsors, and also the inability to compensate teachers for this extra work. The third common group of evils is financial. These financial troubles could all be remedied by centralizing the handling of money in one responsible person, and by the use of a budget and voucher system.

Many experiments have been evolved by principals and teachers from their desire to handle these problems in the best possible way, and many of these experiments have succeeded admirably in lessening the evils mentioned above. Some have been reported in detail in the school journals but many of the best experiments have not been published. I am describing some of the most typical of these experiments here in order to show what has already been done in the way of solving this very important problem in secondary education.

One of the very first attempts to work out a new plan of administration is reported by Principal Keller, of the Manitowoc (Wisconsin) High School. In reporting his experiment, Mr. Keller says:

> It is clear that we must reach outside the school to get the grip on our boys and girls which we must have to get lasting results, not so much as to mind training, but as to heart training.[1]

Mr. Keller has realized the principle of natural instinct and says that the way to begin is to take such interests as the students show

[1] Paul G. W. Keller, *School Review*, XIII (1905), 10–14.

Digitized by Google

and develop them, thus building up activities which will take most of their leisure time. His organizations are based on that principle:

1. For those interested in expression—an expressive Reading Club, under the direction of the teacher of English.

2. For those interested in music—Orchestra, Boys' Glee Club, Girls' Glee Club, under the direction of the teacher of music.

3. For those interested in business activities—management of school paper and athletic teams.

4. For those interested in literary work—Associated Press Club, for clipping news, pictures, etc., under the direction of two members of the faculty.

5. For those interested in athletics—Athletic Association and teams.

6. For those interested in entertainment—Lecture Bureaus managed by students under faculty supervision.

In this experiment we see two innovations, the appeal to interests and the use of the faculty sponsor system.

A plan of administration that was worked out about the same time as the Manitowoc plan was described in an address by the principal of Erasmus Hall High School, in Brooklyn, before the National Education Association in 1910. The speaker among other things said:

In no school in the country is there a greater number of student activities than in the Erasmus Hall High School. Since its foundation it has welcomed every organization and every activity the purpose of which was a good one. The policy of the school is uniformly one of approval and encouragement, the only restriction being that a member of the faculty be selected to be responsible in a general way for the organization.

The presidents of the various classes and organizations have been organized into a Congress of Presidents. The work of the different organizations is unified in the General Organization, which finances the various activities, and is composed of practically the entire student body. All the usual evils are removed by this General Organization control. Abuse of privilege or hostility is eliminated. The principal believes thoroughly in all the various forms of extra-curricular student activities.

The results of the policy are noticeable. (1) There is a fine personal and friendly spirit existing between faculty and students. (2) There is a great spirit of loyalty to the school on the part of students and graduates. (3) There is a very small percentage of school mortality. The teachers by entering heartily into the work have been amply repaid. The pupils have a better attitude toward teachers who have worked with them in their outside activities.[1]

[1] Wm. R. Lasher, *Proceedings of the National Education Association* (1910), pp. 445–50.

Digitized by Google

A number of steps in advance are seen here, especially in the attempt at unification through the Congress of Presidents and the General Organization, and in the close faculty supervision.

The Trenton (New Jersey) High School, under Principal A. Wetzel, worked out and adopted with great success its faculty director system. The principal describes its workings and its success:

> Every student organization in our high school is under the care of a faculty director. Of course, the success of this arrangement depends upon the wisdom and tact he displays. If he poses as an autocrat, he will get into trouble, and so will the organization, but if he acts as an elder brother and advisor, the pupils will soon see that the arrangement works to their benefit and will accept the arrangement as most satisfactory.[1]

To ascertain the feelings of the students concerning the office of faculty director, Mr. Wetzel asked a number of them to state their opinions in writing. The following were given as advantages of the faculty director:

> For literary societies:
>
> 1. It results in serious effort to carry out the purposes of the society; it elevates the work to a dignified plane.
>
> 2. The pupils receive valuable criticism from the faculty director; they accept criticism more readily from him than from fellow-pupils.
>
> 3. Pupils cannot shirk and allow a few to do all the work.
>
> For high-school magazine:
>
> 1. Pupils are more willing to submit articles for the school paper, for with a faculty advisor they know their names will not appear in connection with a discreditable performance.
>
> For athletics:
>
> 1. The withdrawal of the faculty director would result in a shortage of funds.
>
> 2. Our athletic director does not let our enthusiasm at the beginning of the season get too strong, but makes it extend throughout the year.

Surely these student answers are the best possible arguments for the success of careful faculty supervision. The warning concerning the temperament required in a faculty director should be noted. We have already observed that schools find it very difficult to secure teachers capable or willing to do this work, especially without remuneration.

[1] A. Wetzel, *School Review*, XIII (1905), 429–33.

Digitized by Google

Prescott, Arizona, was the first school to report the development of informal social gatherings. In addition to the various athletic games, the school has a number of informal musicals—gathering groups around a piano, and every Fiday afternoon holds an informal dance for all the school.

Miss Gibbs, in reporting this experiment, says it has two desirable results:

> (1) A spirit of democracy is fostered, which is very important in this era of class distinction and class struggle, and no institution is better fitted to bring it about than the public high school; and (2) it occasions a very desirous attitude between pupils and teachers.[1]

The University High School, in Chicago, was also active early in developing the informal social life. Extra-curricular activities have always received careful attention and the school has always been noted for its wealth of activities and its plan of careful faculty supervision. The main feature of its plan is the use of faculty committees. Principal Johnson describes the scheme as follows:

> All the activities are in charge of four faculty committees: (1) Athletics and Games, (2) Literary Clubs, (3) Science and Arts Clubs, (4) Student Publications. The following rules have been adopted:
>
> 1. All clubs must have faculty advisors.
> 2. No club can hold its meetings in the evenings.
> 3. New clubs to be formed must obtain the approval of the appropriate faculty committee.[2]

It is thus apparent that all activities are under careful supervision. The school publishes a manual of rules or *Students Handbook* which can be secured by addressing the principal. The school is unique in having a clubhouse for boys and clubrooms for girls. There are also Friday afternoon informal dances.

Jesse B. Davis, principal of the Central High School of Grand Rapids, Michigan, has probably come the nearest to working out a closely unified and correlated plan of administration. His plan may be briefly outlined as follows:[3]

[1] Louise Gibbs, *School Review*, XVII (1909), 634–37.

[2] F. W. Johnson, *School Review*, XVII (1909), 665–80.

[3] This plan is described more fully in Mr. Davis' book, *Vocational and Moral Guidance* (Ginn & Co.), pp. 119 ff. A copy of the printed rules governing extra-curricular activities can probably be secured by addressing Mr. Davis.

Digitized by Google

Advisory Board.—Every society or organization has its advisory board, consisting of two teachers who are chosen by the pupils and approved by the principal, and of two or more students, according to the size of the organization. The teachers on the board act as leaders. The principal is a member of the board ex officio.

Advisory Council.—The teachers on the various boards may be brought together by the principal as an advisory council to deal with difficult problems and determine the general social policy of the school.

Student Council.—The students who are members of the various boards, and also certain students chosen at large to represent those who may not be members of any society, act as a student council. This council is used to secure the good will and loyal support of the general student body for the administration of the school.

Leadership Clubs.—The principal calls together the boys of the student council and the lady vice-principal, the girls, to discuss in an intimate way the problems of leadership.

All activities are classified into five groups: (1) the Academic Group, (2) the Arts Group, (3) the Athletic Group, (4) the Social Group, (5) the General Group. No pupil is allowed to belong to more than one organization under the same group at the same time. No pupil is allowed to hold office in more than one organization at the same time.

This is the most effective plan I know in providing for a control of student participation so as to prevent a few students from monopolizing all the activities and keeping others out altogether.

Edward Rynearson, principal of the Fifth Avenue High School of Pittsburgh, Pennsylvania, has worked out, as a solution for this same problem of limited participation and overloading, the following scheme of majors and minors:

1. In order that the activities may be selected with discrimination, they are grouped as major and minor activities.

Major	Minor
Baseball	Camera Club
Basket-ball	Commercial Club
Class play	Debating Society
Debating teams	German Club
Football	Journal staff
Journal staff	Reporters
Business manager	Literary Society
Editor-in-chief	Mathematics Club
Literary editor	Penmanship Club
Soccer football	Technical Club
Society play	
Swimming team	
Track	

Digitized by Google

2. A pupil whose scholarship, strength, and conduct permit, may belong to one major and two minors concurrently, or to three minors concurrently. No pupil may belong to more than one major at the same time.

V. E. Logan, principal of the high school at Armour, South Dakota, is experimenting with a unique plan of compulsory participation. In a personal letter, he describes the plan, as follows:

Each teacher has charge of at least one branch of student activities and gives a grade in it just the same as in any other course. A very careful record is kept, and this is copied into the permanent record.

Each year a student is required to make one credit in student activities along with the regular academic work. Failure to do this results in an incomplete record for the year just the same as a failure in any other course.

This year we have allowed one half a credit on each of the following: football, boys' basket-ball, boys' glee club, girls' basket-ball, girls' glee club, physical training, and program. The program is rather unsettled. We allow a student to give a reading or several of them can give a little play for which they get whatever credit we think it worth. Usually they are given a half-credit for program. This work is done at the regular assembly period.

Some of the experiments consist, not so much in the organization of a scheme of administration, as in the cultivation of a certain spirit. Miss Anna Wilson, of the high school at Crawfordsville, Indiana, writes of a plan there which might aptly be called the "family idea."

It has ever been my desire to make the high-school days the most hopeful and happy of all days, and our school is always spoken of as "the family," a possible idea with an enrolment of between three and four hundred. We have at least three "family reunions" a year, when as many as possible of our college "older brothers and sisters" and those about us come back to sing with us "Auld Lang Syne" and celebrate our triumphs. Those occasions are at the beginning of the year when the "younger children" (the Freshmen) are introduced and welcomed and the college people are wished success for the year's work, at the Christmas holidays, and at Commencement week, with the farewells to the Seniors and the Alumni Banquet.

Everything exists for the good of the family as a whole, and most difficulties are settled in "family conferences." We meet as a family for devotional exercises twice a week. Every two weeks we have meetings of boys and girls separately, to consider and discuss questions of health, morals, proper behavior, etc. The boys have their athletic teams, and of course we have literary and debating societies, press club, glee club, orchestra, and chorus—besides a committee on social affairs.

Digitized by Google

The high schools of Detroit, in a somewhat similar manner, have been developing a family spirit by the use of their "house" scheme of organization. J. Remsen Bishop, principal of Eastern High School, writes:

In some of our high schools, the "House" idea prevails, the pupils being gathered into groups, segregating the sexes. At Eastern High School, however, the policy is to avoid such separation. Our grade-room principals are men and women of keen insight and warm sympathies. They are really friendly advisors to their pupils over whom they have charge, in addition to being executive officers. This seems to bring about a family feeling and many group activities develop from time to time.

You inquire about our school organizations. We have all the usual organizations and activities, but our chief endeavor is to develop the social life of the school through what we call "grade-room parties." We have six grade rooms in this school, averaging two hundred to the room. The grade principal then appoints a committee to manage the affair. The committee sends the invitations to faculty and parents; it arranges for music and refreshments, and in general the members have excellent practice in perfecting the details of such an entertainment. The benefits observed so far by the teachers are an improvement in the social manners of the children, and a more cordial feeling toward the teachers of the school on the part of the pupils.

Many schools are coming to use the plan known as the "sponsor" system of faculty supervision. This plan has been utilized to its fullest extent and perhaps has been most successful in the Kansas City (Kansas) High School. Here every one of the innumerable organizations and activities is under the complete control of a member of the faculty, known as the sponsor. I give here a few of the organizations from the sponsors of which I have received complete reports concerning their work: the Nature Club; the German Club; the Classical Club (Societa Classica); Sketch Club; Le Cercle Français; the Boys Club; Radio Association.

Chester B. Curtis, principal of the Central High School, St. Louis, which uses this same scheme, in commenting on the plan in his school, points out the difficulty prevalent with this plan. He writes,

Each organization has a sponsor who is my representative and at the same time directs the organization to the extent of his or her presence and by giving advice.

Extra-curricular activities require a vast amount of time for teachers whose services are *voluntary*. We have no means of compensation. Sponsors are

Digitized by Google

usually younger members of the faculty anxious to do an extra bit to aid in the always hoped-for promotion.

J. F. Wellemeyer, principal at Oklahoma City, Oklahoma, writes concerning his attempt at unification through a "general club chairman" and a "central committee":

All work is under faculty committees with large powers. That is, the faculty sponsor or chairman always has the veto power. There is a general club chairman and a central committee which passes upon and unifies all financial affairs.

Dates are placed upon the calendar by authority of the principal alone. Our system is almost perfect.

Several schools have organized school banks, and a few are using these as a centralizing agency for the financial side of extra-curricular activities. George Buck, principal of the Shortridge High School, Indianapolis, writes concerning their plan there in this respect:

All financial affairs are managed by a voucher system, through our rental library office, which is in charge of the Commercial Department.

A very interesting scheme has just been inaugurated at the high school in Little Rock, Arkansas to prevent the too rapid multiplication of activities. It might be called the "charter plan."

No society or class is allowed to form an organization until a charter is granted by the principal.

At West Technical High School, Cleveland, a dual form of administration has just been adopted that somewhat approaches my ideal of a perfect scheme. The principal writes:

The organization of all boys' activities is under the direction of a Faculty Manager, who schedules all games and transacts all business. Girls' activities are similarly organized under a woman Faculty Manager.

This scheme approaches the ideal of having one person, other than the principal, in charge of all extra-curricular activities, the plan which I shall discuss later.

These experiments in the administration of extra-curricular activities which I have reviewed have accomplished much in the way of solving certain of the problems, but each of them has a vital defect. All fail in one respect—they have no *one* responsible head

Digitized by Google

over all these organizations, around and in whom they may be unified and centered. The principal cannot act in this capacity. There are too many other administrative and executive duties upon

TABULAR VIEW OF EXPERIMENTS IN ADMINISTRATION OF EXTRA-CURRICULAR ACTIVITIES

School	Principal	Characteristic Feature
Manitowoc High School Manitowoc, Wis.	Paul G. W. Keller	Appeal to Natural Interests Use of Faculty Supervision
Erasmus Hall High School Brooklyn, N.Y.	William R. Lasher	Congress of Presidents General Organization
Trenton High School Trenton, N.J.	A. Wetzel	Faculty Director
Prescott High School Prescott, Ariz.	Louise Gibbs	Informal Social Group
University High School Chicago, Ill.	F. W. Johnson	The Faculty Committee The Clubhouse
Central High School Grand Rapids, Mich.	Jesse B. Davis	Attempt at Unification Advisory Boards
Fifth Avenue High School Pittsburgh, Pa.	Edward Rynearson	Major and Minor Plan
Armour High School Armour, S.D.	V. E. Logan	Compulsory Participation School Credit
Crawfordsville High School Crawfordsville, Ind.	Anna Wilson	The School as a Family
Eastern High School Detroit, Mich.	J. Remsen Bishop	The "House" Idea
Oklahoma City High School Oklahoma City, Okla.	J. F. Wellemeyer	General Club Chairman Central Committee
Shortridge High School Indianapolis, Ind.	George Buck	The School Bank
Little Rock High School Little Rock, Ark.	J. A. Larson	The School Charter
West Technical High School Cleveland, Ohio	R. L. Short	Faculty Manager

his shoulders. Our study of the extent and the evils of extra-curricular activities seems to make clear that there is a vital need for a new administrative officer in the high school—an officer who may be called a supervisor of extra-curricular activities, and who will devote all his time and energy to the direction and control of these valuable aids to educational training.

Digitized by Google

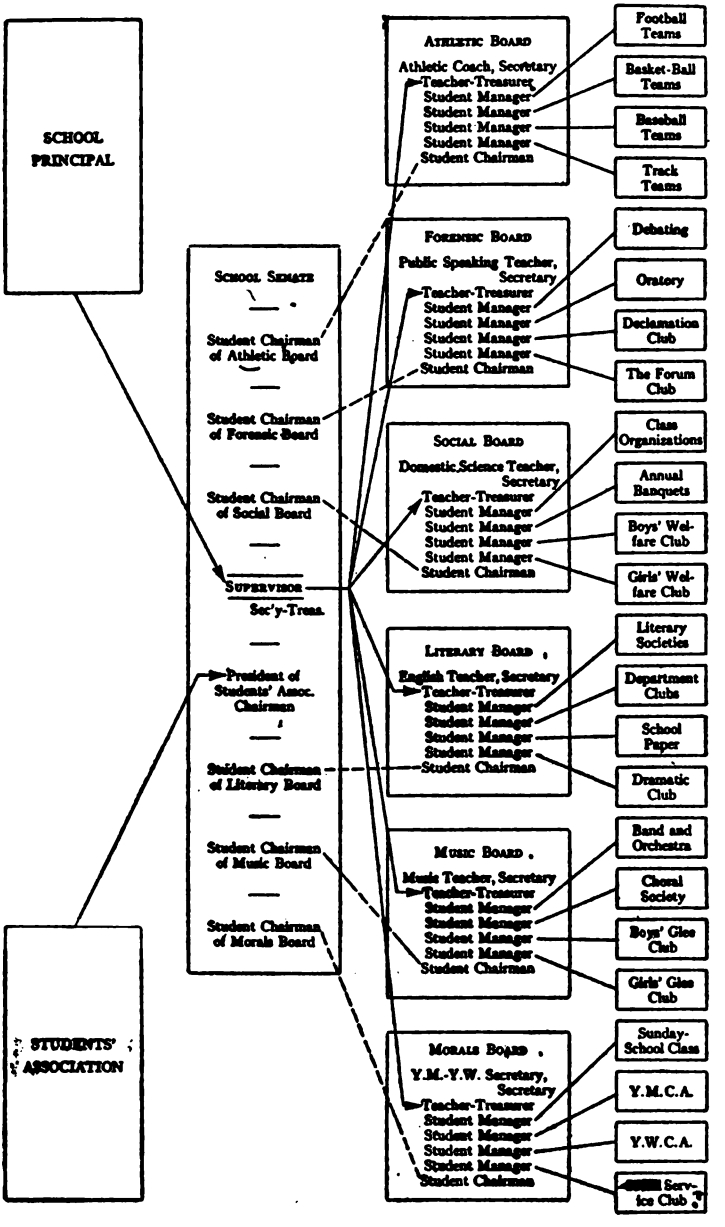
Bearing in mind the evils that have been found to exist, and in the light of the experience and experiments in other schools, I have set about to devise a solution. We need some plan of centralization and unification in which one person of the proper training and temperament would have complete and direct supervision over these activities, and yet where policies could be determined by the principal and the students. We have been helped in our work by a study of the city manager plan of municipal government. Our plan is modeled somewhat after the city manager plan. The principal and students together form the policy-determining body, but an expert supervisor performs all the executive functions, assisted by a small representative senate, the work being carried on under his direction through a number of closely correlated boards. The extent to which the work is unified and systematized may be seen by a glance at the chart which has been prepared to illustrate the scheme.

The general organization of the student body, of which every student is automatically a member, is known as the Students' Association. Each year this body elects a president and this office is considered the highest honor that can come to a member of the student body. The president of the Students' Association acts also as chairman of the School Senate.

The School Senate is the unifying body of the entire scheme. In this organization are centered all the extra-curricular activities of the school. It is composed of eight members, the six student chairmen of the six boards, the president of the Students' Association who acts as chairman, and the Supervisor of Extra-Curricular Activities, who acts as secretary-treasurer of the Senate.

The supervisor is the keynote to the whole scheme. He must be, beyond everything else, a leader of leaders, with tact, sympathy, and attractive personality. He must be a student of modern aims and purposes in education, with a broad social vision. He must have the faculty of getting down into the lives of the boys and girls so that they will trust him and have utmost confidence in his advice. He must be alive to his opportunity of training the students for physical, social, moral, and civic efficiency—to mold them for well-rounded and useful lives.

Digitized by Google



A PLAN FOR THE ADMINISTRATION OF EXTRA-CURRICULAR ACTIVITIES

Digitized by Google

In the small school the supervisor could do the actual coaching of the various activities, but in the larger schools specialists will work under his direction along the lines of each of the various activities.

There are six boards with four activities under each board:

1. Athletic Board—football, basket-ball, baseball, track.
2. Forensic Board—debating, oratory, declamation, forum.
3. Social Board—class organizations, banquets, Girls' Welfare Club, Boys' Welfare Club.
4. Literary Board—literary societies, department clubs, school paper, Dramatic Club.
5. Music Board—band and orchestra, Choral Society, Boys' Glee Club, Girls' Glee Club.
6. Morals Board—Sunday-school classes, Y.M.C.A., Y.W.C.A., Social-Service Club.

Each board is made up of seven members: the student managers of the four activities under the direction of the board, the student chairman, appointed by the president of the Students' Association, a teacher appointed by the supervisor, who acts as his financial agent, and the coach or director from the faculty, who acts as secretary and arranges all schedules subject to the approval of the supervisor who is a member ex officio of all boards.

One of the most valuable results of this scheme of having certain teachers interested is the correlation of the outside activities with various subjects of the school curriculum. Such a correlation is plainly seen in the fields of music, drama, and journalism. These subjects belong to legitimate and essential fields of academic training and yet they relate themselves directly to the social life of both the school and the larger community unit. Other examples of possible correlation should be easily recognized.

The difficult problem of finance is handled very easily under this scheme. Each board draws up a budget at the beginning of each year based on its probable financial needs. The supervisor, on the basis of these budgets, with the assistance of the Senate, fixes the rate of assessment to be laid upon the student body and makes the appropriation for each board. The board apportionment is paid out at the discretion of the board, but the money is handled

Digitized by Google

by the supervisor and only paid out on signed orders from the financial agent on the board. A continual check is thus kept on all expenditures.

During its year of operation this plan has been exceptionally successful. The evils mentioned above have disappeared, and tendencies toward others have been checked. Such a plan ought to be exceedingly successful anywhere in giving the training that should come from participation in extra-curricular activities, without incurring the evils which we found to exist in our schools. I am confident that it can be applied to any size or type of school and that it will solve this intricate problem of secondary-school administration.

Our plan has not only proved successful in practice, but it has the sanction of expert opinion. In the report of the *Cleveland Educational Survey*, published last year, Mr. George Johnson, who conducted the survey of the recreational aspects of the school system, after stating that the administration of recreation in the schools included practically the whole public-school corps from the superintendent to the janitor, an organization loose and indefinite, without interrelations or mutual responsibility, recommends that

> in the Cleveland school system, as in that of every large, progressive city, there should be an officer whose entire time should be devoted to giving a social interpretation to educational work, and an educational interpretation to social work. He should know the general fields of sociology and education and should know intimately the special fields of play and recreation. He should be to the social functions of the school what the superintendent is to the academic work.[1]

That gives us a clear and adequate statement of the function of the officer in the high school whom I have designated as the Supervisor of Extra-Curricular Activities: *He should be to the social activities of the school what the principal is to the academic activities.*

[1] George Johnson, *Cleveland Educational Survey*, Sectional Report on "Education through Recreation."

Digitized by Google

EDUCATIONAL NEWS AND EDITORIAL COMMENT

Lessons in Community and National Life

The White House, Washington, D.C.
August 23, 1917

To School Officers:

The war is bringing to the minds of our people a new appreciation of the problems of national life and a deeper understanding of the meaning and aims of democracy. Matters which heretofore have seemed commonplace and trivial are seen in a truer light. The urgent demand for the production and proper distribution of food and other national resources has made us aware of the close dependence of individual on individual and nation on nation. The effort to keep up social and industrial organizations in spite of the withdrawal of men for the army has revealed the extent to which modern life has become complex and specialized.

These and other lessons of the war must be learned quickly if we are intelligently and successfully to defend our institutions. When the war is over we must apply the wisdom which we have acquired in purging and ennobling the life of the world.

In these vital tasks of acquiring a broader view of human possibilities the common school must have a large part. I urge that teachers and other school officers increase materially the time and attention devoted to instruction bearing directly on the problems of community and national life.

Such a plea is in no way foreign to the spirit of American public education or of existing practices. Nor is it a plea for a temporary enlargement of the school program appropriate merely to the period of the war. It is a plea for a realization in public education of the new emphasis which the war has given to the ideals of democracy and to the broader conceptions of national life.

In order that there may be definite material at hand with which the schools may at once expand their teaching, I have asked Mr. Hoover and Commissioner Claxton to organize the proper agencies for the preparation and distribution of suitable lessons for the elementary grades and for the high-school classes. Lessons thus suggested will serve the double purpose of illustrating in a concrete way what can be undertaken in the schools and of stimulating teachers in all parts of the country to formulate new and appropriate materials drawn directly from the communities in which they live.

Sincerely yours,

Woodrow Wilson

Digitized by Google

In response to this call Mr. Hoover and Commissioner Claxton are enlisting the service of educators who, under the auspices of the Bureau of Education, are preparing lessons in community and national life. The first of these appeared on October 1, and others will follow on the first of each month up to and including May 1. The lessons are issued in the form of circulars of the Bureau of Education, single copies five cents, each additional copy three cents, $2.00 per 100, and $5.00 per 500. The lessons are published in three sections: A for the upper three classes of the high school, B for seventh, eighth, and ninth grades, C for fourth, fifth, and sixth grades.

The material consists primarily of reading to be put directly into the hands of pupils. In each case the text deals with selected topics, followed by questions and suggestions as to topics which may be studied in addition. Each lesson is accompanied by references to supplementary reading-matter.

The following suggestions are offered with regard to the introduction of the lessons into the program. They can be properly introduced as part of the work in reading classes and as subject-matter for discussion in English classes. In this connection it may be noted that the subjects taken up are commonly suitable for compositions. Secondly, the close correlation of the material with geography and history justifies the use in the grades of at least one hour a week drawn from the allotment made to those subjects. Thirdly, where a course in civics or a course in current topics is now given in the school, the lessons are available as part of the regular work. Fourthly, it is suggested that an independent place on the program for a course of this type is amply justified even in the crowded curriculum now given.

The first circular deals with types of social organization. About one-fourth of each of the sections of this circular utilizes the experience of the war to show how interdependent are the members of a modern social group. These "war lessons" take up in the concrete such topics as the following: what the war has used up; what the war prevents men from producing; new needs which grow out of the war and are met by invention.

The section of the circular prepared for use in the upper classes of the high school presents in a series of concrete descriptions the contrast between the life of a frontiersman and the life of a modern city.

The section for the seventh and eighth grades and the first year of the high school describes the life of a Colonial family as an example of a fairly independent economic unit. Following this is a description of a

Digitized by Google

modern factory and the community about it, and a description of a town produce market.

The section for the lower grades deals with the things which society makes and uses. The specific topics in the first circular are the making of cloth in a Colonial family, the water system of a town, and the collection, refinement, and use of mineral oils.

The second circular deals with production and conservation. The series as a whole deals with the economic, sociological, and civic aspects of modern life.

An edition of 12,500 copies of the first circular will be published for distribution by the Bureau of Education. Subsequent circulars will be published in editions of 3,000 copies.

The Superintendent of Public Documents is prepared to supply reprints of each of the sections of 32 pages, when these are ordered in bulk. The sale price of these reprints is to be found on the order card. Small schools are asked to consolidate their orders through the county superintendent or through the state department of education.

It is recommended that teachers secure for their own use each month the three sections. Those in the lower grades will find material in the sections designed for the upper grades which will give them the principles that they should incorporate into their teaching. In like manner the teachers in the upper grades will find illustrative material in the section prepared for the lower grades.

The arrangements provided make it possible to supply during the year to each pupil 256 pages of reading-material at an aggregate cost of eight cents, and to supply to a teacher 768 pages of material for twenty-four cents.

A Conference of High-School Teachers Concerning Marks

The annual school report for 1917 of the town of Stamford, Connecticut, includes a summary of the regulations concerning the marking system used in the high school. The regulations were formulated by means of a series of conferences of the high-school teachers themselves.

Regulations Concerning Marks

General Statement: What?

Mark: Native present ability and accomplishment.
In the consideration of which—take account of:
1. Quantity of accomplishment.
2. Quality of accomplishment.

Digitized by Google

3. Improvement (but only if measured by objective scale or standard).
4. Evidence of personal, specific, and serious purpose.
5. Evidence of initiative.
6. Evidence of supplementing knowledge.
7. Thinking—organization of ideas.

The Function of Marks: A Rule:

Frequent marks should be used solely as a guide and check to the final term-mark judgment.

Rule: The term mark expresses the teacher's answer to the questions: (*a*) Is this pupil able to proceed with this study or should he repeat? (*b*) Not "what has he done?" so much as "what *is he able* to do as [merely] indicated by past performances?" (*c*) Not "has he done *my* course?" but "is he capable of further growth?"

Tentative Definition of "Pass Mark":

"A mark standing for the teacher's judgment that the pupil has done creditably enough, both in amount and quality, to progress or to take work in advance—but no better."

"100 per Cent":

Tentative definition of "100 per cent": "Mark given when, in the opinion of the teacher, a definite assignment has been perfectly performed."

Comments: 1. A term's "definite assignment" implies all—the sum total—of the periodic assignments. The 100 per cent mark is therefore very rarely attainable for a term.

2. This mark, when applied to a periodic assignment (e.g., daily recitation) shall not be impaired by any fault, as in English, that should be charged to the account of any other subject (e.g., English) unless such extraneous fault casts a cloud of doubt upon the perfection of the work in the subject under consideration.

Zero:

Since some amount of "ability" and the factors noted in Par. 1 must always be somewhat present, a mark of zero is impossible.

"D" or Deficient:

A mark of "deficient" has nothing to do with the teacher's judgment of marking as stated in Par. 1—i.e., "ability plus accomplishment."

The pupil receiving such mark is in exactly the status of one who has never attempted the "definite assignments." "Deficient" means a deferred judgment of the teacher. Such judgment, when finally made, may prove to be "pass" or "failure."

Upon the records of the office, "deficient" will have the force and significance of "failure." This mark should not be considered in averaging, analyzing, or plotting marks of ability, the judgment of ability being deferred.

Digitized by Google

"R," refused or rejected, may be used in cases of written exercises that the teacher declines to consider. It may be used instead of "D" in such cases.

Scale and Steps:

a) Sixty is the most feasible pass mark on a percentile basis. Seventy-five being that in present use, however, it would not be wise to re-adopt the former scale; and it does not make any difference.

b) In term marks or for office and home records use:

Failure	Inferior	Medium	Superior	Excellent
X or D	P	F	G	E
Below 75	78	84	91	97

c) In personal record book, use any preferred scale, but for purposes of translating to office reports, use:

93½ to 100 = E or 97
87½ to 93½ = G or 91
81½ to 87½ = F or 84
75 to 81½ = P or 78
Below 75 = X or Fail

Mark by Relative Rank:

Marks should indicate RELATIVE RANK.

Some suggestions for marking:

a) Until teachers become familiar with the steps and how to use the scale, frequent department meetings should be held, to assort papers in five groups according to the scale marks. As many judgments as possible should pass upon the papers. Five papers, representing respectively the averages of the five groups as determined by the average of the teachers' judgments, should be set aside to serve as a tentative objective standard-scale until a better can be substituted.

b) Exchange of marks and papers with other schools and departments should be effected.

c) Teachers should plot curves of their marks at least twice a year, the best self-corrective method possible for faults in marking. The following indicates the usual distribution of abilities:

Excellent—3 to 5 per cent of class.
Good—about 20 per cent of class.
Medium—45 to 50 per cent of class.
Poor—about 20 per cent of class.
Failure—3 to 12½ per cent of class.

d) The principal should require explanation of each case of eccentricity or abnormality in marks.

Punitive Marks:

Punitive marking is intolerable and disallowed.

Digitized by Google

Faulty English and 100 per Cent

Comment No. 2, under the topic "100 per Cent" of the Stamford report reads:

> This mark (100 per cent) when applied to a periodic assignment (e.g., daily recitation) shall not be impaired by any fault, as in English, that should be charged to the account of any other subject (e.g., English) unless such extraneous fault casts a cloud of doubt upon the perfection of the work in the subject under consideration.

By this resolution the teaching staff of the Stamford High School appears to have set itself deliberately against one of the current progressive ideas in the teaching of the mother-tongue. That idea is that language habits are best acquired and maintained in connection with content subjects; that the proper place to teach composition is in close association with the written and spoken work of content subjects. With this idea in mind many a progressive English department is welcoming themes written by their pupils in classes other than English. Many a farsighted principal is insisting that all his teachers regard themselves as responsible for a minimum of correctness in the mechanics of writing and speaking. Some high schools, indeed, have gone so far as to abolish all but one or two composition classes, substituting small laboratory groups of pupils, arranged and classified according to their composition needs. Moreover, their needs are determined by the habits of expression which the pupils manifest in all of their classes.

It is to be regretted that there are still to be found in some schools waspish teachers of history, civics, Latin, and the rest, who stoutly maintain that they have no concern with English—"that is the business of the English department"—regretted that there are school officials who allow such a spirit to manifest itself. How utterly contradictory to the facts of life such a doctrine is may be seen at a glance. A college professor's lectures on history, and his textbooks on the same subject, if expressed in faulty English, are impaired. A clergyman whose speech is filled with language irregularities is handicapped. A graduate of a commercial department who cannot spell and punctuate is dismissed for incompetency. The idea that a class exercise in any topic can be 100 per cent perfect, in spite of the fact that it contains grammatical errors, is about as sensible as saying that a man is 100 per cent ready for a dinner party, even if his necktie be missing and his shoes unlaced. To be sure, an idea is an idea, a date is a date, a fact is a fact, irrespective of the language in which it is set. But a fact is not a 100 per cent perfect fact

Digitized by Google

unless it is ready to do something, to produce something, to function efficiently. Presented in faulty English, it does not function as it ought, and therefore cannot be said to be 100 per cent perfect, nor has the writer or speaker deserved a mark of perfect.

But the perpetrators of this resolution may reply that the last clause anticipates just this criticism. Their statement is "unless such extraneous fault casts a cloud of doubt upon the perfection, etc." By assuming that the fault is extraneous they clearly beg the question. A fault in English is not and never can be extraneous to the subject-matter presented. Of course, any sensible man is willing to admit that a fault in English is of minor importance, and that the content, the *data*, the *fact*, the *substance*, is of supreme import. But the most weighty fact in the world (100 per cent perfect in itself), if faultily presented, becomes less than 100 per cent perfect in its functioning relations. Certainly the writer or speaker is below perfection.

Yet there are high-school faculties which still maintain that good English is a matter for English classes alone. They are not so vigorous in proclaiming the opposite; that bad or indifferent English is a matter often found in other classes. Too often teachers of content subjects refuse to supervise the English of their pupils because they don't know how.

Harvard Bureau of Vocational Guidance

According to arrangements recently completed, the Vocation Bureau of Boston has been transferred to Harvard University. With the opening of the present year the title of the bureau becomes the *Bureau of Vocational Guidance*, and its work will be carried on in Cambridge under the direction of the Division of Education. The Graduate School of Business Administration will co-operate in the management of the bureau by appointing two members of its faculty to confer with the Division of Education on all important plans and activities. Mr. Roy W. Kelly, formerly principal of Fall River Technical High School, becomes director.

The Vocation Bureau was established in Boston in January, 1908, by a group of persons who were interested in education and social service. The idea of an organized effort to aid young people in choosing an occupation, preparing for it, and developing efficiency in it, originated with Professor Frank Parsons, of the Law School of Boston University, nearly twenty-one years ago, while he was preparing his book, *The Ideal City*. Successful experiments at the Civic Service House, in

Digitized by Google

Boston, led to the raising of funds for the maintenance of a central bureau.

The chief aim has been to prevent those costly and often preventable economic and social wastes growing out of the aimless drifting of thousands through school, through employment, and through life. From modest beginnings a varied and extensive group of activities has developed. Nearly every vocation bureau, or vocational-guidance project now carried on in this country, has profited through consultation with the Boston bureau. It was under its auspices that the work was first organized in the Boston schools. A wide correspondence is carried on between the bureau and institutions interested in vocational guidance.

The transfer of the bureau to Harvard comes about very naturally through the fact that Professor Paul H. Hanus, of the Division of Education, has acted as chairman of its Board of Directors since the inception of its work and has aided materially in developing the bureau. The Harvard bureau will maintain all the important activities of the former work and add such as it may be able to attempt under new auspices and enlarged support. It now has the following definite aims:

To carry on occupational research and to publish material giving information concerning occupations.

To continue to promote the movement for vocational guidance and to serve as a center of information on vocational guidance.

To give personal counsel regarding the problems of choosing, preparing for, and entering on a vocation.

To conduct investigations in schools or other institutions, in various lines of business, and in the industries with a view to determine the need and suggest plans for vocational guidance.

To train vocational counselors for service in schools, in institutions, and in employment departments.

To continue, so far as opportunity may offer, the co-operation, begun by the bureau through its connection with Employment Managers' associations, in solving vocational-guidance problems.

To aid and co-operate with other vocational-guidance organizations.

To be of individual and public service in dealing with the questions of vocational guidance arising from the present war.

A Clearing-House for Education Tests

Kansas State Normal School, Emporia, Kansas, maintains an active Bureau of Educational Measurements and Standards. The bureau has

Digitized by Google

just published a useful pamphlet, entitled *Announcements and Price List*, in which are scheduled in convenient form all of the leading scales, nearly thirty in number, used in measuring almost all the subjects of the elementary school and high school. Publishers and prices are listed as well. Still better, the bureau seems to have established itself into a sort of clearing-house, or central store, from which very many of the scales may be purchased directly.

The Smith-Hughes Bill Goes into Operation

The Smith-Hughes bill on vocational education, passed by Congress on February 23, 1917, goes into operation in 1918. A Federal Board is created, consisting of Secretaries Wilson, Houston, and Redfield, with Commissioner Claxton as secretary, and three lay members, namely a representative of manufacturing, of agriculture, and of labor interests. This board is co-operating with a state board of vocational education, in every state which sees fit to come under the operation of the law. A federal subsidy for vocational training appropriates dollar for dollar for every appropriation by a state. The funds thus obtained must be spent directly for salaries, and in no case can more than half of the salary be paid out of these funds. The purpose of the funds is to equip men and women to work successfully in a trade, and the funds will not be permitted to be used in any other way. The funds may be used for three purposes only: (*a*) salaries of teachers, supervisors, or directors of agricultural education; (*b*) salaries of teachers of trade, industrial subjects, and home economics; (*c*) the training of teachers for agriculture, home economics, and vocational subjects.

Various states indicate the amount of federal aid that will be received the first year: for example, Indiana, $45,000; Oregon, $15,000; Nebraska, $18,000; Wisconsin, $39,000. Provision is made for a maximum allotment after five years based on the ratio of the state's population to the total population of the United States.

Soon after the Smith-Hughes bill was passed the *School Review* pointed out a serious danger involved, even if the possibilities were not contemplated by the sponsors of the bill. The danger lies in the fact that the federal government is seemingly throwing its tremendous influence in the direction of pure industrial skill as an independent aim in education. Indeed the entire emphasis of the bill seems to point to a dual system of schools—two systems side by side as in Germany, one for the classes and the other for the masses. It was just this dual system,

Digitized by Google

advocated by Cooley after a study of German schools, which Illinois refused to adopt; and just the system which Wisconsin has adopted. Apparently a great democratic undertaking to provide vocational education, intended to fit children directly for life-work, the plan becomes decidedly undemocratic if the schools themselves become a means of emphasizing class distinctions.

Now there can be no doubt that the danger predicted is making its appearance as the various states hasten to avail themselves of the federal funds. The public press is filled with announcements of new schools, called vocational schools, which are being projected, in addition to the high schools already established. To be sure most of the states have had the good sense to appoint state boards which are in full co-operation with the existing state educational authorities. State superintendents are almost invariably the chairmen of state vocational boards. This apparently guarantees that the vocational interests are to be administered in harmony and co-operation with the cultural interests of the various communities. Wisconsin alone has the unenviable distinction of possessing a state board of industrial education, quite distinct from state educational agencies. In spite of the apparent safety against general adoption of a dual system, we cannot help fearing that the many new vocational schools projected may point the way in a harmful direction. Let us have plenty of great vocational high schools; but let them remain integral parts of a unified state and municipal public-school system—and let every vocational school continue, like Woodward in Cincinnati and Senn in Chicago, to prepare its pupils for citizenship in the very same building in which they prepare for industry.

Digitized by Google

CURRENT EDUCATIONAL WRITINGS

I. A BRIEF REVIEW OF THE CURRENT LITERATURE RELATING TO HISTORY AND THE TEACHING OF HISTORY IN JUNIOR AND SENIOR HIGH SCHOOLS

R. M. TRYON
University of Chicago

At the outset let us explain some of the terms used in the title of this review. By current literature is meant anything that has appeared during the past ten or twelve months dealing with material included in the remainder of the title. History and the teaching of history includes texts, pamphlets, courses of study, and articles dealing with the history material suitable for students in the last six grades of the public schools, and the method of presenting this material. The terms junior and senior high school are too well known to need explaining.

TEXTBOOKS

During the period covered in this discussion two texts in junior and six in senior high-school history have appeared. The two for the junior high school deal with the European background of American history, both of them following rather closely the recommendations of the Committee of Eight for the sixth grade.

Woodburn and Moran's text[1] opens with a chapter on "The Dawn of History," a valuable addition to the suggestions of the foregoing committee. This chapter is followed by twenty-five well-written others. These chapters begin with the rise of the Greeks and end with the early attempts of the English to found colonies in North America. The book is well written; it contains many excellent illustrations and maps, questions and suggestions to the pupil, and a pronouncing list of words at the end of each chapter. The main topics in each chapter are indicated by bold-face type. These topics are usually treated with sufficient length to save the book from the encyclopedic treatment too common in history texts. On a whole the book is attractive, accurate, and will no doubt prove a strong competitor against the dozen or so others now in this field.

Jennie Hall's book is made up of three main parts, viz.: "The Ancient World," "The Newer Nations," and "Beginnings of Our Own Times." The

[1] Woodburn and Moran, *Introduction to American History*. Longmans, Green, & Co., 1916; and Jennie Hall, *Our Ancestors in Europe*. Silver, Burdett & Co., 1916.

Digitized by Google

titles of these parts suggest their contents. One hundred and forty pages are devoted to Part I, 104 to Part II, and 82 to Part III. The list of illustrations is a very long one. There is also a considerable number of maps and plans scattered throughout the book. At the end of each chapter one finds a long list of questions of doubtful value. Following the last chapter is a list of important dates, which is too long to be of any value to the ordinary teacher. The omission of the bold-face paragraph headings, for which are substituted marginal headings and large topic headings run across the page, is quite a relief. To the writer's thinking the marginal headings could and should have been omitted. Generally speaking the make-up of the text is attractive, and the contents deal with concrete material well in the range of the understanding of the pupils for whom the book was written. Two of the texts for the senior high school deal with modern European History,[1] one with early European history,[2] one with ancient,[3] one with mediaeval and modern,[4] and one with the history of the United States.[5] In the publication of Knowlton and Howe's *Essentials in Modern European History*, Longmans, Green, & Co. have completed a two-book series of European history, the first volume of which appeared in 1912. This second volume is a noticeable improvement over the first one. It opens with two excellent chapters on the social, political, industrial, and commercial conditions in Europe in the early eighteenth century, and closes with one on the advance of democracy since about 1870. Much attention is given to the topics in European history which have a direct bearing on the history of our own country. The book presents no general organization of the field covered. The chapters simply follow each other in co-ordinate relation with a continuous numbering of the main topics throughout the book. There is an abundance of marginal headings which detract from, rather than add to, the usefulness of the book as a text. There is a rather long list of maps and plans and a sufficient number of well-selected illustrations. At the end of each chapter one finds an abundance of pedagogical aids in the way of suggested topics and questions for further study, collateral reading with topics and exact references given, source studies, suggestions for map work, map references, and a general bibliography. All of these will be of great value to the teacher who plans to make the book the basis for a year's work in modern history, since the actual material given in the text is not sufficient for more than a semester course.

For a course in European history since the French Revolution there is probably no better text than Hazen's *Modern European History*. The book

[1] Knowlton and Howe, *Essentials in Modern European History*. Longmans, Green, & Co., 1917; and Hazen, *Modern European History*. Henry Holt & Co., 1917.

[2] Webster, *Early European History*. D. C. Heath & Co., 1917.

[3] Breasted, *Ancient Times*. Ginn & Co., 1916.

[4] Robinson, *Medieval and Modern Times*. Ginn & Co., 1916.

[5] Fite, *History of the United States*. Henry Holt & Co., 1917.

Digitized by Google

opens with two excellent chapters summarizing the conditions in Europe and in France just prior to the outbreak of the Revolution. The last chapter contains material on the European war up to the time the book went to press. Twenty-six good maps in color, three in black, and a long list of illustrations add much to the value of the book. No general organization of the entire field is given, the thirty-four chapters following each other in co-ordinate relation. The system of marginal headings in bold-face type is used rather than the paragraph headings so common in texts of a similar nature. The few pedagogical acts are confined to a list of topics with the exact reference on each at the end of each chapter. These, however, are given in considerable abundance, making possible much reading beyond that given in the text. The part of the book dealing with the French Revolution exists in a separate volume.

The appearance of Webster's *Early European History* adds another valuable text to the growing list already in this field. Schools devoting one year to European history down to 1648 will be interested in Webster's book. It is the writer's judgment that it will prove to be one of the best in its field. Two hundred and ninety-eight pages are devoted to the Orient, Greece, and Rome, and 389 pages to mediaeval history, thus making it possible to devote half of the year to ancient Europe and the remaining half to mediaeval. The organization is by chapters appearing in co-ordinate relation with the big topics in each chapter numbered consecutively throughout the book, there being 240 of these big topics. At the end of each chapter are what are termed "Studies," made up in most part of questions based on the material given in the chapter. No specific reference aids are given in the body of the text. There is, however, in the Introduction a number of pages devoted to "Suggestions for Further Study" which contain a great amount of useful material. As to maps, illustrations, and plates, the book is well supplied. The Appendix contains a long table of events and dates, which will be likely to hinder rather than help the inexperienced teacher.

The texts by Professors Breasted and Robinson are models in the matter of textbook-making. Their content, appearance, and general make-up will please the conservatives in the field of high-school history. They cover the fields in European history proposed in 1898 by the Committee of Seven. It should be said, however, that they deal with what might be termed traditional European history in a fresh and unique manner. Emphasis is placed on conditions and institutions rather than on events. This being true, one finds in them much material that the texts in these fields written ten years ago do not contain. Both the authors and publishers deserve much praise for bringing out these excellent books right in the midst of a transition period in high-school history. They will do much toward keeping our feet on a solid foundation until we make up our minds just what phases of certain new proposals we wish to adopt.

One who has read Professor Fites's *Social and Industrial Conditions During the Civil War* and *The Presidential Election of 1860* would expect a history of the

Digitized by Google

United States from his pen to contain features not commonly found in high-school history texts in this field. A mere glance through the contents of the book will convince one that Professor Fites has placed much emphasis on the social and industrial development of the country, economic progress, and recent history, more than one-fourth of the volume being devoted to the period since 1865.

The book is divided into eight parts, which for teaching purposes in the high school have impractical names and date boundaries. These, however, will not hinder an experienced teacher who has a teaching organization of his own to follow. The chapter organization follows the plan of giving the names of the big topics in large type and inserting paragraph topics in the margin. The first is an excellent scheme, while the second should be omitted in a book for high-school seniors, whose chief business in reading a paragraph is to find out what the author is talking about therein. The pedagogical aids at the end of each chapter are of four kinds, viz.: general references, special topics, illustrative material, and suggestion questions, all of which will be of much value to the teacher and the student. The few illustrations and maps scattered throughout the text have been well selected. On a whole the book is a valuable addition to the already somewhat long list now in this field.

OUTLINES AND SYLLABI

But few state departments of education issue outlines and syllabi that are of much help to the teacher. New York and New Jersey are exceptions to this rule, especially in the matter of high-school history. The New York State Department of Education has for several years issued an elaborate syllabus of history and civics for the secondary schools. The 1910 syllabus has been revised to October, 1916.[1] This syllabus has been, since it was first published, one of the best on the market. It contains detailed outlines of courses in Ancient History to 800 A.D., History of Great Britain and Ireland, Modern History, Parts I and II, and United States History. Each outline contains excellent suggestions relative to library and notebook topics and map work. The general organization proposed for each course is the best that has come to the attention of the writer.

The high-school social studies including history syllabus issued last year by the New Jersey State Department of Public Instruction[2] contain courses of study in outline as follows: Early European History to 1700 including English History and Colonial American History, Modern European History since 1700 including contemporary civilizations, United States History since 1760, Civic Theory and Practice, and Economics. The pamphlet also contains

[1] *Syllabus for Secondary Schools*, 1910. Revised to October, 1916, "History and Civics." Albany, N.Y.: University of the State of New York, 1917.

[2] *The Teaching of the Social Studies including History*. Trenton, N.J.: State of New Jersey, Department of Public Instruction, 1916.

Digitized by Google

excellent suggestions relative to helpful books, pictures, wall and authors' maps, globes, and atlases. While the general organizations of the foregoing courses do not seem to the writer the best ones for teaching purposes, yet on the whole the outlines are excellent ones and should be of great service to the teachers of these subjects.

PAMPHLETS, JOURNALS, AND REPORTS

Two reports on history and the teaching of history in the secondary school have been published this year. In the *School Review* for February, March, and April, 1917, appeared in most part a study made by Hugo H. Gold, of the University of Iowa.[1] In Part I of his study Mr. Gold deals with the administration of the curriculum and content of courses in history, the materials for which were taken from 242 of the most recently published courses of study received from 236 cities in 41 states. Part II contains a discussion of methods and material used in high-school history. The data for this part were obtained from answers to a questionnaire received from 135 teachers representing 60 high schools or high-school systems in various sections of the country. While the study contains most of the errors usually found in questionnaire investigations, yet it has many suggestions of considerable value to history teachers. It seems unfortunate that Mr. Gold did not profit from the glaring defects of the study which served as a model for his own.

A more recent report than that of Mr. Gold is the one made by Dr. Leonard Koos which was published recently as chapter v in his *The Administration of Secondary-School Units* (The University of Chicago Press, 1917). This monograph of nearly 200 pages contains a digest and interpretation of facts gathered for that use by the *Committee on the Reorganization of the Secondary School and the Definition of the Unit of the North Central Association of Colleges and Secondary Schools*. The chapter on "History and the Other Social Studies" contains in all probability the most nearly accurate information relating to these subjects in the secondary school that has ever been collected. The method used by Dr. Koos in collecting the data safeguarded his report from many of the customary inaccuracies in studies of this type.

Some excellent material on the teaching of history has recently appeared in two journals.[2] The entire issue of the January, 1917, number of the *Ohio History Teachers' Journal* is devoted to suggestions for the teaching of modern European history in high schools. This material will be of much service to teachers who are struggling with the problem of modern European history. The suggestions Professor Perkins makes are very practical and helpful. This journal is issued in January, March, May, and November of each year. Almost every issue contains material of great value to a high-school history teacher.

[1] Hugo H. Gold, "Method and Content of Courses in History in the High Schools of the United States," *School Review*, XXV, Nos. 2, 3, and 4.

[2] *Journal of Educational Psychology*, May, 1917. Baltimore, Md.: Warwick & York; and the *Ohio History Teachers' Journal*, January, 1917. Columbus, Ohio.

Digitized by Google

Almost all of the May, 1917, issue of the *Journal of Educational Psychology* is devoted to studies in the teaching of history. The three leading articles are by Messrs. McCollum, Myers, and Sackett. They have the following titles which suggest the nature of their contents: "A Study of the Attainments of Pupils in United States History," "Delayed Recall in American History," and "A Scale in Ancient History." There is also a short article on recent publications in history by the editor, Professor J. C. Bell. The articles by Messrs. McCollum and Sackett represent good beginnings in the matter of tests in history. To the writer's knowledge this is the only published material in the field of history tests.

Three pamphlets should be mentioned before closing this discussion. The first is the report of a study made at the University of Illinois by Professors Bagley and Rugg.[1] In a pamphlet of 59 pages they report the results of a study of twenty-three texts in United States history for Grades VII and VIII. The results are very useful to one who desires to know what such texts have been emphasizing during the past fifty years. The chapter on "The Hall of Fame" is an illuminating one, showing what historical personages have received the most attention from the authors of the texts examined.

Ginn & Company recently published a pamphlet containing certain papers previously collated and issued by the Association of History Teachers of the Middle States and Maryland. The pamphlet contains several papers on the general topic "History Teachers for Secondary Schools." Persons interested in the topic will be glad to get the material in the convenient form in which it now exists.

The College Entrance Examination Board have done service to history teachers in publishing specimen answers in history.[2] It will be of considerable help to teachers preparing students for these examinations to see the good and bad papers which this pamphlet contains. Two papers as they were actually written in ancient, mediaeval, modern, English, and American history appear in the pamphlet. One of these papers in each field received a high grade and the other one a low grade, the reasons for which the reader cannot always see.

It should be said in closing this brief review of the literature relating to history and to the teaching of high-school history that the material appearing from month to month in the *History Teachers' Magazine*[3] has been purposely omitted. It goes without saying that the material in this magazine deals with the teaching of history, and therefore needs no statement to this effect in a review of this type.

[1] W. C. Bagley and H. O. Rugg, *The Content of American History as Taught in the Seventh and Eighth Grades*. Bulletin No. 16, University of Illinois, Urbana, Ill.

[2] *Specimen Answers of College Candidates in History*. New York: College Entrance Examination Board, 1916. Price 25 cents a copy.

[3] Editor, A. E. McKinley, Philadelphia, Pa.

Digitized by Google

II. COMMENT ON CURRENT EDUCATIONAL WRITINGS

A. AN IMPORTANT BOOK ON THE TEACHING OF HIGH-SCHOOL SCIENCE

The traditional organization of a textbook on the teaching of a subject of study generally includes a formal discussion of the historical development of the subject in question; the values and place of the subject in the curriculum; a conventional classification of the subject-matter; and an orthodox presentation of accepted methods of the teaching (for example, inductive, deductive, etc.). The latter are ordinarily described in such general terms that no one but the most experienced teacher can translate the general laws and principles (which have been taken bodily from abstract treatises on psychology) into concrete classroom instruction. A second method involves the mastery, on the part of the author, of established principles of psychology concerning the mental processes involved in the learning of the subject in question. It involves, also, making a very definite and clearly expressed application of these principles to the specific problems of teaching the subject. In the past neither our courses in educational psychology nor special methods of teaching the different subjects have done this. It is with a feeling that we are entering at last on an intelligent use of the best results of psychological analysis of the learning process that we review Professor Twiss's new book *Principles of Science Teaching*.[1] The book is "aimed right" because it is built on an analysis of "thinking" as concerns scientific material and is not primarily a book which emphasizes the content of scientific subject-matter itself. The author is evidently vitally interested in the mental activity that children exhibit in studying scientific subjects rather than in an adult logical presentation of the subject-matter based on an academic point of view. The author's experience in school work confirms this conclusion, he himself having been a science teacher, author of textbooks and laboratory manuals in physics, and more recently a professor of education. For example, chapter iii, entitled "The Genesis of Science," is a very good elementary discussion of the development of modes of thinking in which are contrasted elementary, empirical, and animal types of learning with adult, human, constructive ways of thinking. The stress that he lays upon the learning process in connection with instruction in science is an outstanding characteristic of the first half of his book. Again, in chapter iv the mental processes of children as the crux of the teaching problem and their study in relation to the problems of science are taken up step by step. The book is significant in that it carries over to the teacher clearly a sound application of the psychology of "generalization." For example, this statement typifies the attitude of the author toward methods of teaching: "The teacher should constantly be aware that a general statement means nothing to anyone unless

[1] G. R. Twiss, *Principles of Science Teaching*. New York: Macmillan, 1917. Pp. xxvi+486.

Digitized by Google

it serves to call up in his mind a large number of images and memories of particular, concrete facts that are included under it and that have been repeatedly associated with it and with one another."

While the book cannot be said to include a detailed manual of method with its larger function of presenting the principles of science-teaching, yet it contains detailed illustrative lessons, verbatim accounts of "class conferences," "assignments," problems, laboratory exercises, etc. In his discussion of methods the Herbartian "five steps" are used as a guide for the discussion, but are made very real in the attempt to teach the proper steps in effective classroom work. The extent to which the author has psychologized the teaching of science is indicated again by the detailed and analytical discussion of aims and outcomes of instruction in science in chapter vi. In chapter vii we have the first sound attempt to apply the consensus of psychological judgment derived from experimentation on the transfer of training to sound practical directions for teaching pupils the ability to generalize. For example, we find this:

1. Training in one kind of activity may improve ability in other kinds of activity when the former has elements of content or elements of method in common with the latter.

2. Therefore the highest disciplinary value for general, non-technical education is to be found in the studies and activities that have the maximum of elements of content and elements of method that are common to the greatest number of essential or important life-activities, both individual and social.

The chapter throughout avoids controversial debate over the issue of general training and seeks to put in the hands of the teacher a tool which will enable him to make use in the field of science of that great opportunity for the generalization of experience in the solution of problems. Succeeding chapters of the book apply specifically the principles laid down in the first part to classroom and laboratory instruction, lecture demonstrations, and review lessons. A brief discussion is given of each of the sciences, a larger amount of space being devoted to physics and chemistry than to biology, geology, or general science. The book contains excellently organized bibliographies and detailed instructions concerning the selection and purchase of equipment, fulfilling in this way the function of a teaching manual. The last chapter presents briefly and very inadequately the problem of testing the results of instruction. To sum up the work, we have no hesitation in saying that no teacher of science should be without this new textbook.

B. A NEW BOOK SUMMARIZING EDUCATIONAL MEASUREMENTS

The measuring movement in education has developed a voluminous literature. Recently school men have felt the need for a systematic organization of the tests and scales which have come from the activity of the measures.

Digitized by Google

During the last year several rather complete annotated bibliographies have been published and two textbooks have come out. The editor has criticized the latter on the following counts: (1) they have not selected the best representative scales and standard tests to put before teachers; (2) they have included almost no evaluation of the tests; (3) they have not shown how they can be used to improve teaching in a definite way; and (4) they have not supplied school people with complete bibliographies of the tests and scales that are available. *Educational Tests and Measurements* by Monroe, De Voss, and Kelly[1] we recognize to be an improvement on the two previous textbooks. It is a brief textbook which aims to place in the hands of school teachers and administrative officers a summary of the tests and scales which have been published up to the present time in each of the elementary and high-school subjects of study. A brief chapter is given on the inaccuracy of present school marks to introduce the need for quantitative measurement in school practice. Following this the tests are presented in the next six chapters by subjects—arithmetic, reading, spelling, handwriting, language, and the high-school subjects.

The material is organized in each chapter under a fourfold scheme: (1) A brief discussion of the problem of testing abilities in the subject of study in question. This on the whole is very brief and hardly an adequate analytical treatment of that problem. (2) The presentation of each of the standardized tests and scales which has appeared for the measurement of abilities in that subject. It should be pointed out that no detailed principles are laid down for the critical evaluation of the scales in question. Neither do the authors make such critical evaluation, the presentation aiming to be informational only. This aim is carried out to the extent that a non-technical presentation is given of each of the tests. The authors do not reprint the scales and tests in full, but select typical portions to illustrate what has been done, referring the reader to the printed test or scale which he can secure if he desires. (3) Standard scores which have been set up as a result of the use of the tests and scales in each subject are summarized. This portion of the work places in the hands of the reader a fairly good summary, in condensed form, of the published standards. (4) A section is included in each chapter which discusses how to use the results of measurement. This cannot be said to be an intensive psychological discussion, but goes so far as to point out established "laws" of habit formation, memory, etc., with an elementary treatment of the application of these laws to instruction. The authors, however, make very little psychological analysis of the learning process in each of the different subjects. The book provides the reader with very complete bibliographies and on the whole will fill a need which has been experienced by school men recently for a fairly complete compilation of the tests which are now available.

[1] W. S. Monroe, J. C. De Voss, and F. J. Kelly, *Educational Tests and Measurements*. Boston: Houghton Mifflin Co., 1917. Pp. xxii+309. $1.50.

Digitized by Google

III. BRIEF DESCRIPTIVE STATEMENTS OF TWO NEW PUBLICATIONS

1. RUGG, H. O. *Statistical Methods Applied to Education.* Boston: Houghton Mifflin Co., 1917. Pp. xiv+426. $2.00.
[To be reviewed in next issue.]

A complete textbook for students of education, superintendents, and teachers untrained in mathematics, of the methods of treating numerical data collected on school problems. A carefully graded discussion showing the lay reader the use of statistical methods in education, the collection and tabulation of data, the derivation, computation, and interpretation of each of the methods now used in the study of school problems: the frequency distribution, averages, measures of variability, ideal curves and their use, measures of relationship. The use of statistical methods in reporting school facts discussed in detail.

---

2. RUGG, H. O. *Illustrative Problems in Educational Statistics.* Paper. 35 problems. Published and distributed by the author, School of Education, University of Chicago. $0.60.

A book of statistical problems designed to accompany the author's textbook. For administrative officers and teachers as well as for formal class use in normal schools and schools of education. Provides opportunity for practice in working problems which involve each of the statistical methods now used by school men.

IV. CURRENT EDUCATIONAL PUBLICATIONS RECEIVED IN SEPTEMBER

(Detailed discussions of some of the following books will appear later.)

A. GENERAL EDUCATIONAL THEORY AND PRACTICE

DE HOVRE, FR. *German and English Education. A Comparative Study.* New York: Scribner, 1917. Pp. 108.

DIFFENDORFER, RALPH E. *Missionary Education in Home and School.* New York: Abingdon Press, 1917. Pp. 407. $1.50.

GORDON, KATE. *Educational Psychology.* New York: Henry Holt & Co., 1917. Pp. vi+294.

MEAD, CYRUS D. *An Experiment in the Fundamentals.* Yonkers-on-Hudson: World Book Co., 1917. Paper. Pp. xiv+54.

REED, ANNA Y. *Newsboy Service. A Study in Educational and Vocational Guidance.* Yonkers-on-Hudson: World Book Co., 1917. Paper. Pp. xxviii+175. $0.60.

SMITH, HENRY LESTER. *A Survey of a Public School System.* New York: Teachers College, Columbia University, 1917. Pp. xii+304.

Digitized by Google

SNEDDEN, DAVID. *Educational Sociology. A Digest and Syllabus. Part I: Introduction.* New York: Teachers College, Columbia University, 1917. Paper. Pp. 38. $0.55.

SNEDDEN, DAVID. *Educational Sociology. A Digest and Syllabus. Part II: Applications to Curricula and Studies.* New York: Teachers College, Columbia University, 1917. Paper. Pp. 70. $0.80.

TEACHERS OF THE HORACE MANN ELEMENTARY SCHOOL. *The Curriculum of the Horace Mann Elementary School.* New York: Teachers College, Columbia University, 1917. Paper. Pp. iv+138.

THEISEN, WILLIAM WALTER. *The City Superintendent and the Board of Education.* New York: Teachers College, Columbia University, 1917. Pp. ix+137.

WINCHESTER, BENJAMIN S. *Religious Education and Democracy.* New York: Abingdon Press, 1917. Pp. 293.

B. PUBLICATIONS OF UNITED STATES BUREAU OF EDUCATION

HOSIC, JAMES FLEMING. *Reorganization of English in Secondary Schools.* Washington: Government Printing Office, 1917. Pp. 181.

JESIEN, W. S. *Military Training.* Washington: Government Printing Office, 1917. Pp. 35.

JONES, THOMAS JESSE. *Negro Education. A Study of the Private and Higher Schools for Colored People in the United States.* Vol. I, No. 38; Vol. II, No. 39. Washington: Government Printing Office, 1917. Pp. xiv+423 and v+724.

LYFORD, CARRIE ALBERTA. *Three Short Courses in Home Making.* Washington: Government Printing Office, 1917. Pp. 104.

NORTON, HELEN RICH. *Department-Store Education.* Washington: Government Printing Office, 1917. Pp. 79.

PERRY, CLARENCE ARTHUR. *School Extension Statistics.* Washington: Government Printing Office, 1917. Paper. Pp. 30.

SWIGGETT, GLEN LEVIN. *The Conference on Training for Foreign Service.* Washington: Government Printing Office, 1917. Pp. 67.

Ten Lessons on Food Conservation. United States Food Administration. Washington: Government Printing Office, August 1, 1917. Paper. Pp. 64.

C. TEXTBOOKS FOR THE ELEMENTARY GRADES

CHAPLIN, ALETHEA. *A Treasury of Fairy Tales.* New York: Thomas Y. Crowell Co. Illustrated. 12mo, pp. 129. $0.50.

Contents: "Babes in the Wood," "Puss in Boots," "Red Riding Hood," and other stories.

CORY, DAVID. *The Adventures of Puss in Boots, Jr.* New York: Harper, 1917. Pp. 149. $0.50.

GASK, LILIAN. *A Treasury of Folk Tales.* New York: Thomas Y. Crowell Co. Illustrated. 12mo, pp. 123. $0.50.

Contents: "The Golden Fish" (Russian), "The Two Brothers" (Slovak), and others.

Digitized by Google

HARRIS, ADA VAN STONE, and WALDO, LILLIAN MCLEAN. *Number Games for Primary Grades.* Chicago: Beckley-Cardy Co. Pp. 123. $0.60.

Kipling Stories and Poems Every Child Should Know. Book I. Edited by MARY E. BURT and W. T. CHAPIN. Boston: Houghton Mifflin Co. Pp. vi+142. $0.44.

MEYER, ZOE. *The Outdoor Book.* For second school year. Boston: Little, Brown & Co., 1917. Illustrated. Pp. vii+123. $0.40.

PELLETT, FRANK C. *Our Backdoor Neighbors.* New York: Abingdon Press, 1917. Photographics from life by the author. Pp. 209.

Intimate stories from out of doors designed to convey knowledge of wild creatures and to develop a more sympathetic relationship with them.

PERKINS, LUCY FITCH. *The Dutch Twins Primer.* Boston: Houghton Mifflin Co., 1917. Pp. 108. $0.44.

PORTOR, LAURA SPENCER. *The Story of the Little Angels.* New York: Harper, 1917. Pp. 95. $0.50.

SETON, ERNEST THOMPSON. *Wild Animal Ways.* Boston: Houghton Mifflin Co., 1916. Illustrated. Pp. vii+140. $0.60.

SINDELAR, JOSEPH C. *Nixie Bunny in Faraway-Lands.* Chicago: Beckley-Cardy Co., 1917. Illustrated. Pp. 160. $0.45.

Life in other lands told for girls and boys by the Cottontails. Suitable for second and third school years.

SMITH, SCHUCKAI, and Others. *New Common-School Song Book.* Chicago: Beckley-Cardy Co., 1917. Pp. 174. $0.40.

TAPPAN, EVA MARCH. *The Little Book of the Flag.* Boston: Houghton Mifflin Co., 1917. Pp. v+122. $0.40.

THOMPSON, JOHN STUART. *Fil and Filippa.* New York: Macmillan, 1917. Illustrated. Pp. viii+75. $0.40.

Life in the Philippine Islands delightfully told for girls and boys.

WASHINGTON, BOOKER T. *Up from Slavery.* Boston: Houghton Mifflin Co., 1901. Pp. ix+330. $0.60.

D. TEXTBOOKS FOR THE HIGH SCHOOL

BRESLICH, ERNST R. *Third-Year Mathematics for Secondary Schools.* Without tables. Chicago: The University of Chicago Press, 1917. Pp. xviii+369. $1.00.

BRESLICH, ERNST R. *Logarithmic and Trigonometric Tables and Mathematical Formulas.* Chicago: The University of Chicago Press, 1917. Pp. xvii+118. $0.75.

BROOKE, TUCKER. *The Yale Shakespeare. Much Ado about Nothing.* New Haven: Yale University Press, 1917. Pp. 138. $0.50.

CAMPBELL, OSCAR JAMES, and RICE, RICHARD ASHLEY. *A Book of Narratives.* Boston, New York, Chicago: D. C. Heath & Co., 1917. Pp. vi+497.

D'OOGE, BENJAMIN L., and EASTMAN, FREDERICK C. *Caesar in Gaul.* Boston: Ginn & Co., Illustrated. 12mo, pp. xl+120. $1.40.

Commences with a biography of Caesar in simple Latin, thus adequately reviewing the work of the first year. Then follow the first four books of the *Gallic War.* Interspersed throughout are reliable maps and battle plans, attractive illustrations, notes, and explanatory helps.

Digitized by Google

FUENTES, VENTURA, and FRANCOIS, VICTOR E. *A Trip to Latin America.* New York: Henry Holt & Co., 1917. Pp. x+196.

Industries, short biographies, great deeds, in simple Spanish, with exercises, notes, etc., for the English student.

HOLMES, HENRY W., and GALLAGHER, OSCAR C. *Composition and Rhetoric.* New York: D. Appleton & Co., 1917. Pp. xi+353.

From the point of view that while few high-school pupils will ultimately become authors, all must write and speak English in the work of every day.

PAYNE, L. W. *American Literary Readings.* Chicago: Rand McNally & Co., 1917. Pp. xviii+647. $1.40.

Selections from the best writings of twenty-three American masters of literature.

PAYNE, L. W. *Learn to Spell.* A high-school and college book. Chicago: Rand McNally & Co., 1916. Pp. 144. $0.40.

POTTINGER, DAVID T. (Editor). *English Essays.* New York: Macmillan, 1917. Pp. xxi+331. $0.25.

Bacon, Addison, Goldsmith, Stevenson, Emerson, and others.

ROBESON, F. E. *Précis Writing, A Progressive Course of,* pp. 145; *Historical Passages for,* pp. 118. New York: Oxford University Press, American Branch, 1917.

SKINNER, ERNEST BROWN. *College Algebra.* New York: Macmillan, 1917. Pp. 263.

The Yale Shakespeare. Romeo and Juliet. Edited by WILLARD H. DURHAM. New Haven: Yale University Press, 1917. Pp. 144. $0.50.

TANNER, W. M. *Essays and Essay Writing.* Boston: Atlantic Monthly, 1917. Pp. xxv+307. $0.85.

THOMPSON, CHARLES MANFRED. *History of the United States.* Chicago: Benj. H. Sanborn & Co., 1917. Pp. xx+540.

WEBSTER, HUTTON. *Readings in Medieval and Modern History.* Boston: D. C. Heath & Co., 1917. Pp. x+388.

Supplementary readings, chiefly biographical or narrative in character, for high-school students of mediaeval and modern history.

E. MISCELLANEOUS PUBLICATIONS

BARCLAY, WADE CRAWFORD; BROWN, ARLO A.; SHERIDAN, ALMA S.; THOMPSON, WILLIAM J.; and SHERIDAN, HAROLD J. *Life in the Making.* New York: Methodist Book Concern, 1917. Pp. 236. $0.60.

BUTLER, NICHOLAS MURRAY. *A World in Ferment. Interpretations of the War for a New World.* New York: Scribner, 1917. Pp. 254.

FOERSTER, NORMAN, and PIERSON, W. W., JR. *American Ideals.* Boston: Houghton Mifflin Co., 1917. Pp. 326.

A series of essays, addresses, and state papers which express, from the point of view of American statesmen and men of letters, American ideals past and present.

JONES, GEORGE ELLIS. *Hygiene and War.* Carnegie Endowment for International Peace. Division of Intercourse and Education. Publication No. 11. Washington: Carnegie Endowment, 1917. Paper. Pp. 207.

Digitized by Google

THE SCHOOL REVIEW
A JOURNAL OF SECONDARY EDUCATION

VOLUME XXV DECEMBER 1917 NUMBER 10

SOME "MARKS": AN ADMINISTRATIVE PROBLEM

FREDERICK S. CAMP
Stamford, Connecticut

When the microbe of testing and measuring (scientific of course) once finds lodgment in the mind of a superintendent he becomes a victim of its impelling and creative demands. There is no help for him but to proceed to go the limit or else quit the game. But we have a saying in the town in which the writer lives, attributed to an eminent statesman of Connecticut, that "the Lord hates a quitter." (Exact quotation censored.) We did not quit; hence this narrative.

This history of a small reform in marking or grading in our high school is a story of most innocent beginnings that finally ripened into a campaign that proved somewhat of a jolt to a few conservatives in this school in "the land of steady habits." In September, 1916, we employed for the first time an experienced teacher to do various wonderful things for us that we felt in a vague way needed to be done, particularly in the line of self-examination or auto-survey. In the mind of the writer one of the amusing features of this new employment was that he actually did not know what title to give his new teacher, but as a large part of the intended work was to acquaint our teachers with the use of the objective tests and standards, he suggested to the School Committee—

Digitized by Google

that is a New England phrase which means Board of Education out West—that we call her the supervisor of tests and measurements.

One of the first things the superintendent wanted to know was how quickly and completely the pupils going from the grammar grades were adjusting themselves to the new environment of the high school. The supervisor, Miss Catherine E. McCormick, took the grades, which for the balance of this article we shall call "marks," of the children in the 8A grades of June, 1916; that is, the final marks they received in the grammar schools. She then compared these with the marks of the identical children issued February 1, 1917, leaving out of account those who did not enter high school. This opened up quite a number of pregnant questions, suggestive of interesting and sometimes tantalizing problems. (All of this with much more is incorporated in her report to the superintendent which is being prepared for the printer at the present time.)

The most startling and challenging problem, however, was at once seen to be the whole problem of the system of marking in the high school. Our high school registers a little less than 900. We have 40 teachers grouped into the several conventional departments that are to be found in a high school that offers college preparatory courses, scientific and classical; general courses including shop-work, mechanical drawing, domestic arts, domestic science, etc., music courses, including a college preparatory music course; and a commercial department.

In passing it may be interesting to know that the average eighth-grade mark of these pupils was 82.3, while the average high-school mark was 78.9. The writer did not attach any undue importance to the revelations of these deadly averages. He is quite alive to the fallacies that underlie any presumed conclusions that are based upon averages. Nevertheless, we at once examined the marks given by each individual teacher in the high school and made graphs of them.

Our passing mark has been for the last three years 75. We noticed that of the 93 averages considered, 35, or just three-eighths of all, were marked 75, or, as we used to say in college, 35 received a "bald-headed pass"; 25 received 80; 13 received 85; and 9, above 85. Eight marks below pass were given.

Digitized by Google

OUR PROBLEM DISCOVERED

One who has made any study of grading will at once discover that something is wrong when three-eighths of a group barely pass, while only one-half and no more are rated as better than pass. Our problem was of course to take up with the teachers this problem, "What is wrong with the marking system?" We assumed, a priori, that our children were not inferior in general ability.

The statement and solution of such an important supervisory problem as this, so vital and intimate to the progress of nine hundred students, demanded direct and practical methods of attack. The job was to effect some remedy, and that quickly. We put aside the alluring temptation to make "a study" of the situation except as that might incidentally be necessary. We had no thought of overrefining our methods; we were not collecting and collating data to be used in a thesis or in a seminar of a school of education.

The educational statistician therefore will be disappointed if he expects any new contribution. None of our teachers assume to be specialists on the question of rating. We therefore tackled the question in a direct way, and the first thing we did was to hold general meetings at which were present the principal of the school and all his teachers, the supervisor of tests and measurements, and the superintendent. We held three meetings of about an hour and a half each.

WHAT WE MARK

The topic of the first meeting was "What We Mark." It was felt that despite the fact that there must inevitably be a great variability in teachers' marking due to variability in subject-content and variability in personal temperament, it was nevertheless advisable to agree in a general way upon what the fuss was all about. What does a teacher enter marks for anyway? What does he mark?

We had a stenotyped report of the discussions and on looking over this report I find that teachers marked "improvement," "ability," "serious purpose," "moral qualities," "interest in work," "accomplishment." The domestic science department marked

Digitized by Google

"conscientious work," "improvement and ability." The commercial department marked "accuracy, neatness, and promptness," which by the way are three slogan words very properly adorning the walls of the department. They also considered "honesty, courtesy, and zeal." The history department marked "endeavor and accomplishment." One teacher in the mathematics department offered "acquisition of knowledge."

In this almost appalling category of practically all that is good and moral, one would need to have the genius of a field marshal, or of a Beethoven, to reduce it to a harmony that would be workable and practical. Nevertheless we defied the fates and made the attempt. The key was already at hand in the custom that the graded schools had adopted a few years, ago, viz.: *to consider the ability of the child at the time the mark is recorded* without reference to any previous marks, except in so far as previous accomplishment must have a bearing upon present ability. We therefore adopted the following as the hypothetical answer to the question "What Do We Mark?"

Mark *present native ability and accomplishment*, in the consideration of which take account of:

1. Quantity of accomplishment
2. Quality of accomplishment
3. Improvement (but only if measured by objective scale or standard)
4. Evidence of personal, specific, and serious purpose
5. Evidence of initiative
6. Evidence of supplementing knowledge
7. Thinking—organization of ideas—"pointedness" and relevancy

ABYSSINIANS IN THE CORD-WOOD

In working out this tentative agreement upon what to mark, the superintendent kept steadily in mind several notional by-products—important incidentals that are much less likely to trickle into the machinery of high-school practice than into the more flexible grammar-school practice.

First and foremost it is necessary that teachers should forgive pupils their scholastic trespasses. Is the pupil able to proceed? to undertake the advance work? No matter what he was, or did, or did not do, the question is simply, "Can he?" not "Can *him*."

Digitized by Google

When one considers the almost ungradable studies of Snedden's beta list, or the small importance of the values of studies that Bagley lists as "conventional" or "preparatory"—the ignorance of which "brands a person as uneducated," or "which have value as bases for the acquisition of other facts and principles"—as compared with the "utilitarian," the "emotional," the "sentimental," and the "theoretical," one wonders why so many amiable, broad-minded, sympathetic teachers become so much inclined to be rigid and exacting in demanding their Shylockian portions of academic work. (Teachers under a spiritual age of thirty excepted and exempt from any imputation.)

Other very important standards of teaching have become almost predominant in the practice of the more progressive school systems. They are brought in by the newer teachers, but seem to be adopted all too slowly if not reluctantly, and in some cases unintelligently, by the older teachers. I refer to the teaching ideals and standards connoted by the phrases: establishing and evoking a specific purpose; motivation; supplementing knowledge, not only by direction of teachers' assignments, but by "getting after it"; systematic thinking.

To get these ideas fixed in the minds of our high-school teachers as important factors in marking was one of the purposes, though logically incidental, of the first meeting.

THE SCALE

We finally landed on the other side of that bunker only to find our lay in the tall grass of a discussion of scales. The kind of scale used—literal or percentile—really does not matter much. Nor does it really make any difference, except as to convenience as we shall see, whether 60 is the "pass mark" on a percentile basis, or 75. But what is of cardinal importance in any system is the determination of what "pass" should mean.

WHAT IS A "PASS MARK"?

What do we mean by "passing" a pupil? What "passes" him to the next class? What quality or quantity of ability or

Digitized by Google

accomplishment should we demand as a condition of "passing" a student?

Here are some of the opinions offered. I quote them just as they were recorded by our stenotypist reporter, because they reveal in some cases the somewhat static condition of mind that seems to hinder the response of experienced teachers to new ideas. And the conservatism is often in direct ratio to the value of the teacher.

Question: What is *your* idea of a "pass mark"? What conditions should govern in giving it?

Ans. 1: When the pupil has done what is required.

Ans. 2: When he is able to go on with the work.

Ans. 3: I often mark on the moral qualities entirely. I could not say that the pupil is always able to go on with the work. This is only in extreme cases.

Ans. 4: When a pupil has the main outline creditably well he should pass.

Ans. 5: A pupil, especially a commercial pupil, who has fulfilled the letter of the law should be allowed to pass.

Ans. 6: When we put down 75, he is doing all we can reasonably expect.

Ans. 7: Is not progress (improvement?) the important thing?

Ans. 8: When the student has done 75 per cent of the amount required.

Answers 6 and 8 did not seem to fit the case; the others implicitly contained the norm we were seeking. Our conference's work then became a work of synthesis—to try to induce a working definition of "pass mark."

In passing, it is interesting to note the point of view of the last answer; it is so characteristic and general among older teachers of the subjects taught by the one who offered it. His department may almost be guessed. Notice his confusion of ability with work; his emphasis upon quantity. He discounts "present ability" by a horse-power-hour argument. It is the application of the factory piecework time-card to the estimate of the mental and character progress of a human being. It is quite at variance with Answer 3.

Long before this, this question must have occurred to you: "How can a standard definition of 75 be devised to be applied to subjects so diverse in content and educational value as literature and bookkeeping? as history and stenography?"

These questions very naturally were brought up by the different departments at the conference. Discussion seemed to show us, however, that if we could agree upon what we are marking—

Digitized by Google

present ability and accomplishment, in the consideration of which a teacher takes account of the various factors named—we could also agree upon what 75 or the "pass mark" should mean in each department. We agreed upon the following tentative definition of "pass mark": *A mark standing for the teacher's judgment that the pupil has done creditably enough both in amount and quality to progress or to take work in advance, but no better.* An application of this to a few subjects may show how the definition might hold.

Bookkeeping.—This work shall be absolutely correct in every case. The amount required should be no more than a slow pupil can do accurately; brighter pupils might take more work. The judgment is therefore a quantitative one; in other words, has the pupil done the amount of work demanded in bookkeeping, the theory being that every student should be held to a given task until it is correct. This would apply also to commercial arithmetic, and in most cases to mathematics. Other analogous subjects will occur to one.

Stenography, typewriting, etc.—A slight modification of the foregoing principle operates in these subjects for the reason that proficiency largely depends upon the ability to spell, punctuate, and use correct English. With stenographers, it very largely depends upon the possession of a reasonably large cognitive vocabulary. However, 75 should be given in these subjects when a fixed amount of dictation can be accomplished in a fixed or standard period of time and the result contain not more than an agreed standard of permissible errors.

Another category of subjects, corresponding to Dr. Snedden's beta list, must be subjected to a different principle. The teacher's judgment here is much more largely subjective. Frequent departmental meetings with the principal of the school are very necessary if there is to be any approximation of a standard judgment as to whether a pupil has "done creditably enough both in amount and quality" to be advanced.

100 PER CENT

Before considering the steps of the scale, we next considered the higher end, 100 per cent, the pass mark, or 75 per cent, being

Digitized by Google

the lower end. We came to the conclusion that, as above stated, it made no difference what the "pass mark" was called provided some agreement as to its meaning could be arrived at.

Some years ago the pass mark in the Stamford High School was 60 per cent. It always seemed to the writer that the argument that a higher pass mark would induce a higher grade of work by the pupils was fallacious. It seems to have the flavor of fiat money as a medium for the payment of debts, but since the change was made, it did not seem worth while to revert to the old system. The problem, therefore, became the determination of the steps between the pass mark and the theoretical 100 per cent.

The next topic of our discussion therefore was the meaning of the 100 per cent. The discussion on this was lively. The consideration of zero was incidental to it. We came to the conclusion that since we were marking "present ability and accomplishment," and that since any student in a high-school class must have a considerable measure of ability else he wouldn't be there, and must have accomplished in the past considerable work else he wouldn't be there, a zero was an impossible mark. "What, then," I can hear one ask, "would you mark a student who doesn't do anything in a class in a given time?" Our answer is, "We should mark that a 'D,' which means deficient," the consideration of which will be taken up presently. To make this section of the story short, we finally decided upon the following tentative definition of 100 per cent: *The mark given when in the opinion of the teacher a definite assignment has been perfectly performed.*

COMMENTS

1. A term's definite assignment implies all—the sum total—of the periodic assignments. The 100 per cent mark is therefore very rarely attainable for a term, but might frequently be recorded for a given daily assignment.

2. This mark when applied to a periodic assignment (e.g., daily recitation) shall not be impaired by any fault (e.g., in English) that should be charged to the account of any other subject, unless such extraneous fault casts a cloud of doubt upon the perfection of the work in the subject under consideration.

Digitized by Google

Something was said above in regard to a "D" mark. If a student comes to class truly empty or unprepared, he is marked "D" and not zero. The pupil receiving such a mark is in exactly the same status as one who has never attempted the definite assignments, and "D" or deficiency therefore stands for a deferred judgment of the teacher. Next day or subsequently the student may make up this work or may give unmistakable evidence that the blank for which he was marked "D" has been filled. The teacher must then exercise his judgment in marking him, and such judgment when finally made may prove to be a pass mark or a failure mark in place of the "D." Upon the records in the office, "D" of course must have all the force and significance of a failure until another record is substituted for it.

(We also mark "R" in some cases, which stands for refused or rejected, in the case of written work that the teacher refuses to consider. This is occasionally used upon slovenly or carelessly arranged papers.)

STEPS OF THE SCALE

Following is a digest of the next topic of discussion taken up:

Before we adopt a scale and its steps between "pass" and the theoretical "best" that we call 100, let me present a few conclusions that have been generally agreed upon by students of this matter of marking. We may well accept them at least as working hypotheses. If you question them, please at least consider them as hypotheses—statements to be proved or disproved by actual experiment, and not to be discarded without trial.

1. Marking should be done either by relative positing, or by the employment of an exact, scientifically prepared standard scale.

We will call the first the grouping method and the second the yard-stick method.

2. When neither method is used, and the mark expresses the teacher's absolute judgment, there will be wide and considerable variability in the marks of different teachers.

3. An examination of this variability in teachers' marking has led most authorities to the conclusion that there cannot be more than four groups of quality—four "steps"—above the pass mark. (A few students admit five.)

In regard to the variability of marks: If each of you should mark a set of papers on our present percentile basis, we would probably find a variation of from 5 to 15 per cent, and we need not feel surprised to find a mean

Digitized by Google

variation of at least 8 per cent. If you doubt this, try it before you finally deny the statement.[1]

If we should assume a mean variation of 8 per cent, our "pass mark" should be fixed at 68, so that a mark of 72 would be the mean of marks between 68 and 76, a range of 8 per cent; a mark of 80 representing the range between 76 and 84; 88 for the range between 84 and 92; and 96 the mean mark for the range between 92 and 100.

For if one teacher marks a paper 76 and another marks the same work 84, these two representing the probable extremes of variation—8 per cent—while the other judgments assign marks somewhere between the two, what mark should be recorded in fairness to the student? Why not 80, the mean?

CHECK AND PROOF

Now suppose you take another set of papers, preferably by the same students in the same subject. Assort them into five groups: failures, poor, medium, good, and excellent. You probably would find yourselves in remarkable agreement. Your disagreements would probably hinge upon borderline cases; and if they did, we would have further substantiation of the statement that teachers' marks vary considerably.

TABLE I

Description of Steps	Failure	Pass Mark	Poor or Inferior	Fair or Medium	Good or Superior	Excellent	Assumed Best Possible	
Literal Symbols	X or D or R		P	F or M	G	E		
Numerical Equivalents on Basis of 60 Pass	Below 60	60	65	70 75	80 85	90 95	100	Steps = 10
Same on Basis of 75 Pass	Below 75	75	78	81¼ 84	87½ 91	93¾ 97	100	Steps = 6¼

If you should assort them into six or more groups, the amount of disagreements (variations of judgments) would increase; and into four groups, as many colleges grade students, your differences of judgment would practically disappear.

Now it happens that a division of four groups above a pass mark of 60 gives us steps of 10 per cent; while four groups above a 75 pass mark gives us steps of 6¼ per cent. The former is preferable; either is practical; neither is theoretically correct on an assumption of an 8 per cent mean variability of

[1] *English Journal*, November, 1916, gives striking illustration of variability in the marking of compositions.

Digitized by Google

teachers' judgments. But we have no final sanction as to how much variability actually would be found, so why worry?

The diagram on p. 706 was then displayed upon the blackboard. The advantage of fixing 60 as pass will readily be noted.

The natural steps of 10 are much more convenient to handle; but our school has become used to 75, and it did not seem wise to make the change. The decision was as follows:

a) In term marks or for office and home records use:

Failure	Inferior	Medium	Superior	Excellent
X or D	P	F	G	E
Below 75	78	84	91	97

b) In personal record book, use any preferred scale, but for purposes of translating to office reports, use:

$93\frac{3}{4}$ to 100 = E or 97
$87\frac{1}{2}$ to $93\frac{1}{2}$ = G or 91
$81\frac{1}{4}$ to $87\frac{1}{2}$ = F or 84
75 to $81\frac{1}{4}$ = P or 78
Below 75 = X or fail

Marks should indicate relative rank.

Some suggestions for marking:

a) Until teachers become familiar with the steps and how to use the scale, frequent department meetings should be held, to assort papers in five groups according to the scale marks. As many judgments as possible should pass upon the papers. Five papers, representing respectively the averages of the five groups as determined by the average of the teachers' judgments, should be set aside to serve as a tentative objective standard scale until a better can be substituted.

b) Exchange of marks and papers with other schools and departments should be effected.

DISTRIBUTION OF ABILITIES

At this point we considered the suggested evidence that began the campaign—the distribution of marks turned in by the high-school teachers.

There was a preponderance of marks just above pass marks that under any system would group as poor. We did not expect to plot a "peakless" curve; neither did we expect to find so high a

Digitized by Google

"peak" below medium. Twenty-five per cent—875 out of 3,503—were grouped "poor," and nearly one-sixth "failed."

The heavy lines of the figure give the plot we found for 3,503 names; the dotted lines show a theoretically normal distribution on the basis of 12 fail, 20 inferior, 40 fair, 20 superior, and 8 excellent in a group of 100 marks.

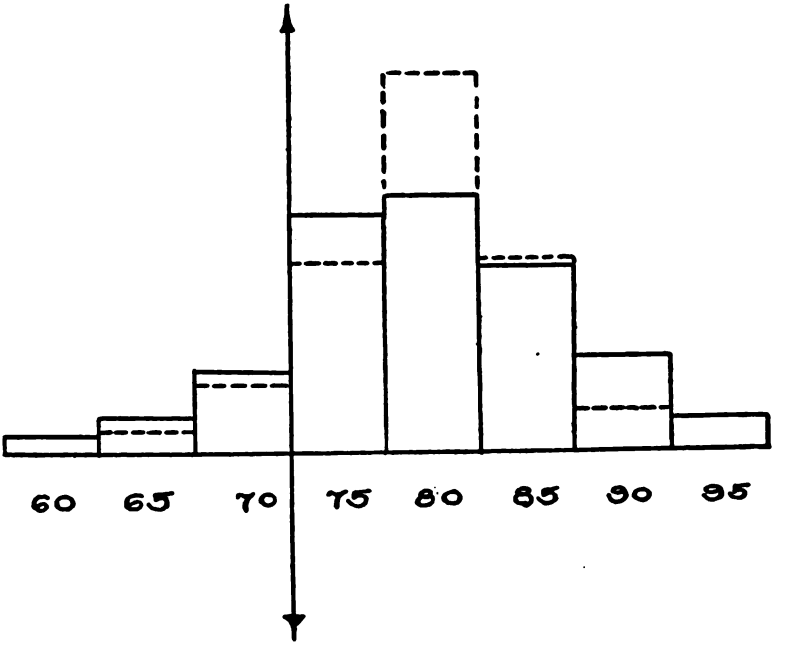


FIG. 1.—Heavy lines for 3,503 marks. High school, dotted lines, theoretical—(Hall-Finkelstein Graph). Reduced to 100-marks basis.

The most striking revelation, however, and one that could be expected where such various opinions of "What We Mark" are found, was the contrasts shown in the graphs of marks of individual teachers. We reproduce two, Graph No. 2, of a mathematics teacher's 167 marks, and Graph No. 3, of a Latin teacher's 92 marks.

GRAPHS AS TEXTS

The graphs of all the teachers were plotted. The supervisor of tests and measurements examined them with many of the

Digitized by Google

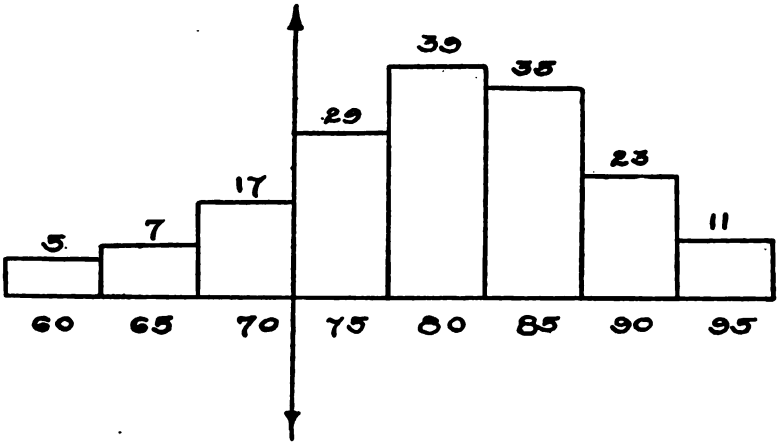


FIG. 2.—Mathematics. An excellent graph. Healthy distribution, but unusual

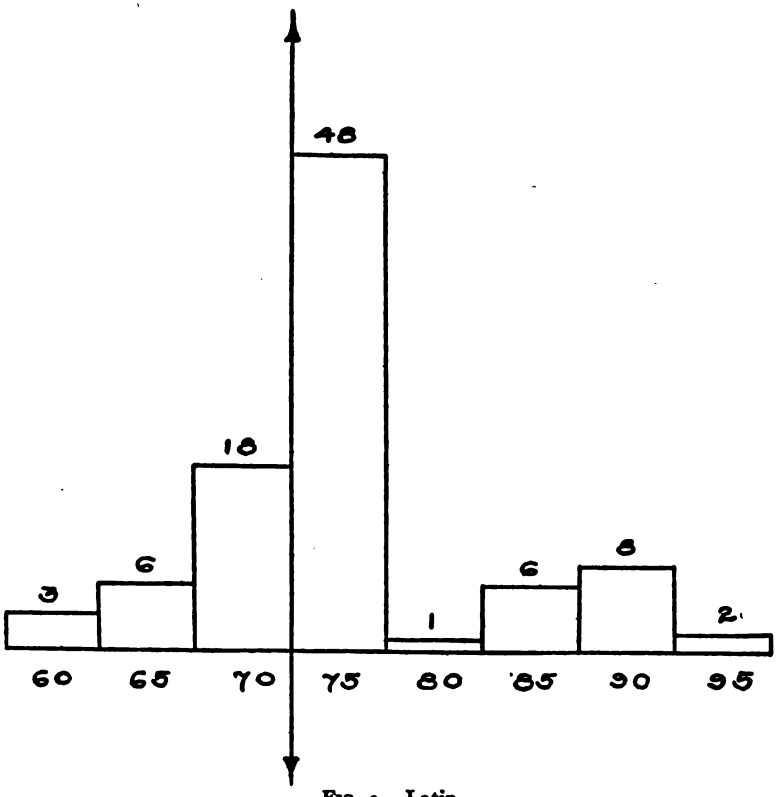


FIG. 3.—Latin

Digitized by Google

teachers, and several conferences were held. The campaign followed true political form—it became personal, a "house to house canvass" near its end.

At the end of the term, January, 1917, the marks the same teachers recorded for the same first-year students were again analyzed. The comparisons are shown in Table II:

TABLE II

Description of steps	X	P	F	G	E
Theoretical distribution	12	20	40	20	8
December, 1916, distribution	16	50	20	10.5	3.5
January 26, 1917, distribution	8.5	33	38	17	3.5
Preparatory course, January, 1917, distribution	12	32	31.5	19.5	5
Commercial course, January, 1917, distribution	3	33	43	20	1
General course, January, 1917, distribution	9	34	42	10	4

Some improvement will be noticed. One-third "poor," however, was still unhealthily large. Although all three departments show about the same percentage of "poor"—32, 33, and 34 per cent respectively—it will be noticed that in the case of the college preparatory students the percentage of poor is higher than that of medium. Why? What was the trouble?

We examined the graphs of all the sections of the IB preparatory students by subjects and found that the chief cause of the disturbance was in Latin. The percentages of distribution were: X 16.6; P 32.4; F 29.6; G 21.2; E 0.

One of the graphs of the Latin marks is shown above. Two others follow; Graph No. 4 of 92 marks and Graph No. 5 of 132.

This condition as to the marking of Latin is probably more or less general. If it is, does it not point to the need of study by the specialists? I am led to believe that the condition of the case in our high school is not peculiar but typical. Are the demands of Latin too exacting? Are the requirements of Latin teachers, generally speaking, too rigid? Or is it because of inadequate preparation in the grades? Can it be more vitally motivated? With no intention to pun, what is the case of Latin?

Digitized by Google

IS IT WORTH THE CANDLE?

The writer will not presume to reply. In justice to a fair answer, however, he must state that stress of work of another

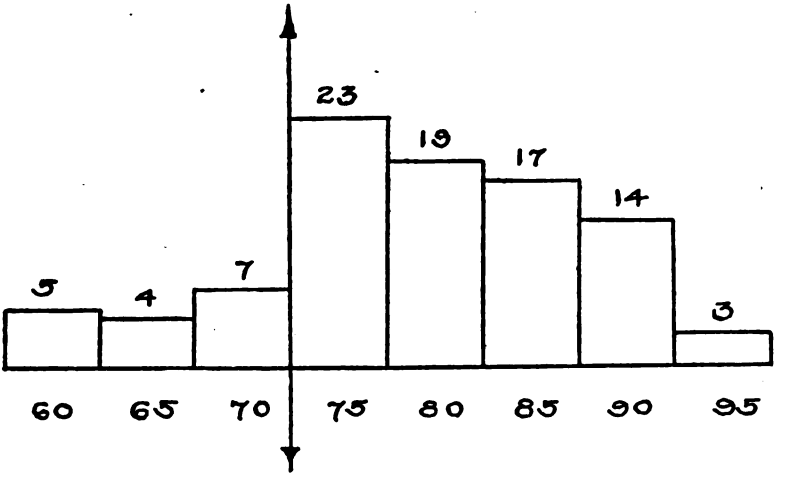


FIG. 4.—Latin

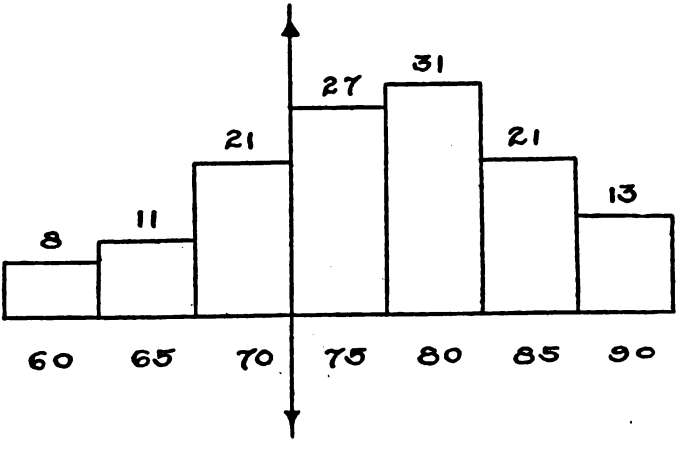


FIG. 5.—Latin

nature precluded that very essential part of supervision, active "follow-up," after February 1.

Digitized by Google

Nevertheless, Table III appears in the annual report (October 1) of the superintendent:

TABLE III

PERCENTAGE OF FAILURES BASED UPON ENROLMENT

SUBJECT	FIRST TERM				SECOND TERM			
	I	II	III	IV	I	II	III	IV
English	9.8	10.9	12.0	9.1	9.0	8.5	13.4	10.0
Latin	15.8	14.5	.....	22.0	7.2	9.4	12.1	3.3
Algebra	23.2	.....	7.6	8.3	10.3	.....	.....	.....
Trigonometry	.....	.....	.....	.....	.....	.....	.....	10.0
Geometry	.....	22.5	.....	.....	.....	23.6	.....	.....
History	6.7	.....	15.3	14.5	14.2	.....	2.8	1.2
German	.....	23.6	18.5	6.2	.....	38.4	15.6	5.4
French	.....	20.4	24.6	3.1	.....	19.0	22.0	6.7
Spanish	.....	42.8	.....	.....	.....	28.0	.....	.....
Chemistry	.....	.....	12.7	.....	.....	.....	10.5	.....
Physics	.....	.....	.....	2.3	.....	.....	.....	3.6
Bookkeeping	8.4	8.1	.....	.....	12.1	15.0	.....	.....
Commercial arithmetic	.....	12.5	.....	.....	.....	7.3	.....	.....
Commercial geography	.....	15.0	.....	.....	.....	11.1	.....	.....
Commercial law	.....	.....	18.5	.....	.....	.....	6.8	.....
Stenography	.....	.....	14.2	21.0	.....	.....	23.8	5.4

(In other subjects, no proportion of failure exceeded one-eighth.)

The general drop in percentage of failures, which amounted to more than a tendency, was of course gratifying. Though this report covered all subjects and all four years, is it taking too much for granted to suppose that our investigation of first-year marks had much to do with this result? The first term shows 17 cases of over one-eighth failed; the second term only 10. In 21 cases out of the 30, the percentage of failure was reduced.

It should go without saying that no direction, order, mandate, or suggestion was made that a teacher *must* keep her failures below 12½ per cent. All we asked was that our teachers give intelligent attention to the matter of marking and of causes of failure.

BIBLIOGRAPHY

Finkelstein, I. E., *The Marking System in Theory and Practice*. Warwick & York, 1913.

Hall, W. S., "A Guide to the Equitable Grading of Students," *School Science and Mathematics*, June, 1906.

Kelly, F. J., "Teachers' Marks, Their Variability and Standardization," *Teachers' College Contributions to Education*, 1914.

Digitized by Google

Rugg, H. O., "Teachers' Marks and Marking Systems," *Educational Administration and Supervision*, February, 1915. Warwick & York. Contains also a bibliography of 39 titles.

Steele, A. G., "Training Teachers to Grade," *Pedagogical Seminary*, XVIII (1911), 523.

[NOTE.—To make valid comparisons of graphs, care must be taken to reduce them to a common denominator.]

Assuming the dotted graph (No. 1 above, p. 708) as a base, we find the highest peak representing 40 marks of the 100. It was made, in the original drawing, 2 inches high.

For the black line graph of 3,503 marks, we use the proportion:

$$\frac{3{,}503}{100} = \frac{X}{40}, \quad X = 1{,}401$$

A peak of 2 inches therefore would represent 1,401 marks, and the various "peaks" would be drawn proportionately.

Digitized by Google

SOCIALIZING THE STUDY OF HISTORY

FRED W. TRANER
University of Nevada

A most encouraging sign of better teaching methods is the ever-increasing demand that instruction be vitalized—that subject-matter consist only of what can actually function in the child's life, and that the method of presentation make the child appreciate the close and vital connection between his studies and real life. In general, this demand is being met by socializing the subject-matter and adapting it to the child's interests, and by the "problem" type of presentation. Thus, with reference to the organization of the history course, the Committee on Social Studies of the Commission on the Reorganization of Secondary Education of the National Education Association recommends in its report:

> 1. The adoption to the fullest extent possible of a "topical" method, or a "problem" method, as opposed to a method based on chronological sequence alone.
>
> 2. The selection of topics or problems for study with reference to: (*a*) the pupil's own immediate interest; (*b*) general social significance.[1]

The history-methods course developed during the past two years at the Nevada State Normal School is based upon these principles. A presentation of the general method we have followed is here given to suggest one method of applying these principles and to indicate what we are doing toward improving the situation that the Committee mentions, that "probably the greatest obstacle to the vitalization of the social studies is the lack of preparation on the part of teachers . . . . in part a lack of training in the facts and laws of social life as formulated in history . . . . particularly

[1] "Report of the Committee on Social Studies of the Commission on the Reorganization of Secondary Education of the National Education Association," *Bureau of Education Bulletin*, 1916, No. 28, p. 37.

Digitized by Google

true in the elementary schools and in rural schools."[1] It is the hope that our history-methods course will result in giving the state's elementary teachers a thorough acquaintance with the most important social conditions today and in teaching them the need and method of socializing the history material.

The fundamental principle that has determined the general content of the course and the methods to be advocated is based upon the aim of education as adjustment to the social environment, more commonly stated as social efficiency. With the emphasis upon efficiency in a *present* world, the chronological method as ordinarily handled was abandoned from the first as failing in any real way to make the child's environment more intelligible to him. For, if history is to be of value as an educational means to adjustment by explaining and interpreting the present, the starting-point certainly ought to be a presentation of the thing to be explained and not the explanation as in the chronological method; the problem ought to precede the solution. What seemed to be a more rational and effective method was therefore adopted: first, a thorough consideration of that element of the environment which our historical study is to interpret, as that element exists today; and then the history of that element, or the story of how it has come to be. Since by this plan only those historical events are studied which contribute to the interpretation of the element under discussion, the method is topical. The topics possible will be suggested by the elements into which we may analyze our environment. One such analysis is presented at the close of this article.

This social environment, as we have used the term, is considered to consist no less of principles, theories, and laws than it does of concrete institutions and organizations, or specific social activities and achievements. Pre-eminently it must be emphasized as the product of a social group drawn together by common aims and organized for the accomplishment of specific purposes. Our analysis of this environment emphasizes three important elements as constituting much of the world about us: the element occasioned by society's effort to protect itself; the element produced by man's natural desire to prosper and to make his life more enjoyable; and

[1] *Ibid.*, p. 58.

Digitized by Google

the element represented by society's organization or government for accomplishing its purposes. The policeman or the soldier, the fire department, the work of the street-cleaning department, quarantine regulations, the labor permit for the boy of fourteen, compulsory school attendance—all of these are manifestations of society's effort to protect itself; with all of them the child comes early and constantly in contact. So, too, painting, music, literature, parks and playgrounds, all the occupations of man, and all his philanthropic and religious expressions are evidences of our desire to make life more worth the living. And election days and voting, political parties and political propaganda, public officers and public buildings, indicate the existence of society's organization or government. These are large and comprehensive aspects of our environment; they touch every boy and girl intimately and continuously and are, it is felt, of real interest to the child. They furnish, consequently, excellent topics for study.

Since any of these aspects may become the starting-point for our historical consideration, it is evident that topics for discussion will deal, not only with the political events in the nation's development, but with all matters touching the people's needs and desires: economic and industrial, religious, aesthetic, etc. In addition, then, to the topics which are concerned with the acts of the established government and which constitute a large part of many history texts, such questions may be taken up as, for example: crime and its treatment, disease and medical progress, agricultural methods and inventions, American art, the development of the modern newspaper, and the conveniences of the modern home.

To illustrate the method used, we may consider the manufacturing industry—a very large and important factor in our present-day life. As indicated above, a study is first made of the industry as it exists today. This involves any number of economic and social problems, though certainly among the questions to be considered are: the importance and extent of manufacturing in the United States today, the factory system with its division of labor and standardized product, trusts and the large corporate control of industry, labor unions, and the relation of manufactures to city life and city-life problems. The government's relation to manu-

Digitized by Google

facturing through the tariff, the work of the Department of Labor, the most important laws concerning the hours of labor, factory conditions, etc., and the many ways in which manufactures are being regulated through Congressional control of interstate commerce may well be studied in the same connection. After gaining a fairly thorough conception of that phase of our present environment which is determined by manufacturing, we turn for the purpose of comparison to a previous period in history characterized by a wholly different system of manufacturing. Such a period in American history is the Colonial. Here we have a population almost wholly agricultural, with manufacturing but one phase of the farmer's life; we note the absence of the factory and power-driven machinery, of the corporation and the capitalist, of the labor union, and of the modern type of city.

A great value of such a comparison is to bring home forcibly to the student the fact that these various elements of his environment, which he has always taken as a matter of course, are, after all, unusual and noteworthy. It is to be hoped, too, that now the problem will arise naturally of asking, since the present differs so radically from the past, how this great change has been brought about. The history study may now follow as an answer to a problem consciously felt.

This history study is chronological. Beginning with the Colonial days, we take up the various events which mark the development of manufacturing industry: the invention of the spinning and weaving machinery (which, it must be pointed out, is not an American but a European achievement), its introduction into America, the effect of the War of 1812 upon manufacture in the United States, the growth of factories with their long hours of labor and unhealthful conditions in the mill towns of New England, the invention of the steam engine, the protective tariff, the rise of labor organizations, the growth of the trusts, the increase and change of character of immigration after 1880 and the settlement of foreigners in the big cities, the Sherman anti-trust law, the interstate-commerce law, the creation of the Department of Commerce and Labor, and the enactment of laws and important court decisions affecting labor. Other related topics may be included. Extensive

Digitized by Google

treatment of all those mentioned may not be desirable; some may be omitted altogether, especially if they can be included under other topics.

Beginning as we do with the present world, our topics will naturally be selected for their social significance. Whether, in addition, they will appeal to the pupils' own immediate interests, will, of course, depend upon the pupils and the method of approach. There are, it is true, in any one of the aspects of the environment which we have indicated, many things which are technical or specialized and beyond the interests of children. But, if we devote our study to the larger elements only, we should have topics that do interest them because they are such a common and comprehensive part of the child's life.

Besides meeting the general principles recommended by the Committee on Social Studies, the method described has two advantages worth mentioning. In the first place, we have a criterion for judging the relative value of the large number of events discussed in the history text and the amount of attention any event may deserve. In the light of the large topic selected for treatment, and in answer to the problem of how our present situation has grown out of a past, we shall decide upon those historical events as most important which have had the most direct influence upon the present. The importance that is to be attached to the treason of Aaron Burr, to the Whiskey Rebellion, or to the Virginia Charter of 1619, will depend upon the extent to which some phase of our life now is determined by the event in question.

Another value of this method lies in the opportunity offered for emphasizing the price that past society has paid for the progress we enjoy. The better labor conditions of today, the gradual elimination of bad tenements and sweatshops, the wonderful mechanical inventions for simplifying toil, all the privileges and comforts of our modern life, have been bought by the devotion and sacrifices of individuals and organizations, in spite of hardship, persecution, and the constant opposition of sinister forces. A realization that progress is always made in just this way and that it is our obligation to continue this progress for the future ought to be a most potent factor in making history function for better citizenship.

Digitized by Google

The following outline presents in some detail the analysis we have made for suggesting the topics that might prove satisfactory for historical treatment by the method described. Its value lies probably more in its suggestiveness than in its completeness.

A. The element of our environment arising from society's effort to protect itself.
   I. Protection against foreign aggression.
      1. By peaceful representation: ambassadors and treaties.
      2. By promulgating specific foreign policies and doctrines.
      3. By the maintenance of an army, navy, militia, etc.
   II. Protection against dangerous persons.
      1. Criminals and delinquents through the police, courts, and prisons.
      2. The insane and feeble-minded by confinement in special institutions.
   III. Protection against disease and physical degeneration.
      1. Through health officers, quarantine regulations, sewage and garbage disposal, street-cleaning departments, provisions for medical schools, control of medical practice, provision for pure water and food supply, playgrounds, etc.
      2. In the occupations, through laws regulating the hours of labor, especially for women and children, providing healthful conditions of work, requiring safety appliances, etc.
   IV. Protection against ignorance.
      1. Through a public-school system and compulsory education.
      2. Through libraries and museums.

B. The element of our environment produced by the desire for personal welfare and for making life more enjoyable.
   I. The element growing out of the occupations of the people.
      1. Agriculture.
         a) Extent and importance of the industry; present methods of farming; problems of rural life.
         b) The federal government and agriculture.
            (1) Attempts of the farming class to get aid through political influence.
            (2) The Department of Agriculture.
            (3) The government's land policy.
               (*a*) The Homestead law.
               (*b*) The reclamation policy.
            (4) Aid for agricultural education.
               (*a*) Morrill Land-Grant act.
               (*b*) Smith-Lever act.
            (5) The Federal Farm-Loan act.

Digitized by Google

2. Commerce and trade.
   a) Nature and importance of the industry; complex system by which trade is carried on.
      (1) Means and methods of transportation.
      (2) Banks and the system of exchange.
   b) The federal government and commerce.
      (1) Government aid for transportation.
         (a) Appropriations for better roads.
         (b) Land-grants to railroads.
         (c) Improvement of waterways and building of canals.
      (2) Government and currency.
         (a) Coinage and money legislation.
         (b) Banks and banking acts.
      (3) Control of interstate commerce.
         (a) Interstate-Commerce law.
      (4) Consuls and consular reports.
      (5) Department of Commerce.
3. Manufacturing.
   a) The factory system of manufacture.
      (1) Large corporation control of industry.
      (2) Factory life and problems.
      (3) Labor unions.
      (4) Effect on city development and city problems.
   b) The government and manufacturing.
      (1) The protective tariff.
      (2) Control of manufacturing through control of interstate commerce.
      (3) Department of Labor.
4. Other important occupations: mining, lumbering, fishing, grazing.

II. The element occasioned by the religious nature of people.
1. Religious institutions.
   a) Churches.
   b) Y.M.C.A. and Y.W.C.A.
2. Philanthropic and social-service enterprises.
   a) Settlement work.
   b) Red Cross.
   c) Hospitals and dispensaries.
3. Important religious principles.
   a) Separation of church and state.
   b) Freedom of worship.
4. Philanthropic provisions by organized society.
   a) Poor farms, orphan homes, etc.

Digitized by Google

III. The element arising from the people's desire for pleasure, enjoyment, and comfort.
  1. Fine arts: painting, music, sculpture, architecture.
  2. Literature and newspapers.
    a) Collection and dissemination of news.
    b) Printing and bookbinding.
  3. Conveniences and comforts of home life.
    a) Home furnishings and adornments.
    b) Appliances for heating and lighting.
  4. Travel.
  5. Organized society and the people's welfare.
    a) Parks and playgrounds.
    b) Libraries and museums.
    c) The postal system.

C. The element determined by society's organization (government) for accomplishing its desires.
  I. The national organization: a federal union.
    1. The individual states: a government within a government.
      a) Power of the states v. that of the Union.
    2. The Union.
      a) Administrative and executive departments.
      b) Legislative department.
      c) Judicial department.
  II. The great political principle on which the organization is founded: democracy—government of, by, for, the people.
    1. The right of suffrage.
    2. All officers of the government responsible to the people.
  III. Political parties and party government.

Digitized by Google

HOUSEHOLD-ARTS ARITHMETIC

KATHARINE F. BALL
Minneapolis, Minnesota

MIRIAM E. WEST
Plainfield, New Jersey

Unlike many courses in mathematics, the course in household-arts arithmetic which the writers have been teaching in the Plainfield high school makes no pretension of considering arithmetic an end in itself. No attempt has been made to include all the arithmetical principles and processes that have received the sanction of custom. The problems have not been chosen primarily because they served to illustrate some phase of arithmetic. The material has not been arranged with reference to the mathematical order of topics. Yet the course is distinctly a course in arithmetic, not in household arts; it involves the use of those principles and processes which are usually considered important, and the topics are arranged in logical order. More than this, the course is based upon principles which the writers believe to be in harmony with modern educational ideals.

In the first place, the course has been designed to meet the needs of a particular group, namely, girls from twelve to sixteen years old in the junior high school, the daughters of wage-earning and small-salaried men in urban communities. These families belong economically to the middle class. They are above the level of a struggle for mere existence; they are below the level of luxury and idleness. In these families, although there may occasionally be servants, the daughters are expected to participate in household duties. The mothers may have sewing machines; the homes may be equipped with gas and electricity; carpets or rugs cover the floors; curtains hang at the windows; there may even be a vacuum cleaner to lighten the burden of housecleaning. Yet the pressure of necessity is so sharp that, as a rule, every

Digitized by Google

dollar must be used to its utmost if the social efficiency of the family is to be maintained. Some girls will leave school at the close of the compulsory period, not always because of dire necessity, but in order to lighten the family burden.

For this group of girls an intelligent understanding of the economic aspect of homemaking is a matter of immediate concern. They are having first-hand experience with one of the most important social problems, and they know that sacrifices have to be made and economies have to be practiced in order to keep the children clothed, fed, and in school. This fund of experience can be made an educational asset if it can be drawn upon in a way that is adapted to the interests and capacities of these young girls. Actual homemaking is at least several years ahead. For that reason this is not the time to give them a vocational course in the sense of specific training for assuming the responsibilities of managing the home, but it is a suitable time to broaden their general education. The problems of the home furnish a means of achieving this result. The course may be said to have a threefold aim:

1. To enable the girls to understand and appreciate the economic problems in their own homes.

2. To make them skilful in the computations and methods of reasoning involved in everyday affairs, so that arithmetic may become a tool in effective living.

3. To make them able and apt to see the controlling number relations in practical situations.

In order to achieve these aims, the first question that arises concerns the organization of the material. The traditional mathematics course has usually been organized with reference to the mathematical principles involved. Problems were selected to illustrate such principles as were considered important, with little or no reference to the value of the problems themselves or their relation to the lives of the pupils. Instead of following the traditional method, this course has been organized on the assumption that the best way to secure a working knowledge of arithmetic is to follow the order determined by the content of the problems. Accordingly, problems that have to do with sewing are grouped together, whether they involve fractions, or percentage, or

Digitized by Google

decimals. The problems selected are those that naturally find their place in the upkeep and maintenance of the kind of homes that have been described, problems in reading gas meters, in marketing, budget-making, planning meals, etc. Corresponding to the five divisions in the family budget—food, shelter, clothing, operation, and advancement, or higher life—there might be five main divisions in the course, preceded by an introductory section devoted to the study of the principles of budget-making and the keeping of accounts.

The selection of problems to be included in each section has been made in accordance with the following criteria:

1. The subject-matter must represent a real problem within the immediate experience of the girl.

2. The arithmetical solution must also be the practical solution, i.e., the solution used in everyday life.

3. The problem must be of relatively frequent occurrence, of relatively permanent significance, and of relatively wide or general applicability.

4. The technical difficulties or the complexity or the sociological significance of the subject-matter must not be so great as to overshadow the arithmetic.

A brief analysis will serve to show how these criteria have operated in determining the selection of the problems and the scope of the course.

In the first or introductory section are included problems in budget-making and the keeping of accounts. Standard budgets stated both in percentage and in dollars are analyzed and used as guides in the application of budget-making to practical situations. The girls make budgets from various kinds of data, such as price-lists, receipts, and accounts. In this way they learn the practical value of records of expenditures, and they are taught to keep, not merely the usual simple cash account which is nothing more than a record of money spent, but also a distributed account which can be used as a guide in budget-making and as a check upon undue expenditure in any division of the budget.

No attempt has been made to teach girls how to make out checks, nor how to keep bank accounts, nor how to keep "double-

Digitized by Google

entry" accounts of any kind. Important as these problems are, they are not within the immediate experience of twelve- to sixteen-year-old girls, and they must be taken care of elsewhere in the curriculum.

After the economic basis of the course has thus been laid in the study of the budget, the other topics may be taken up in any order that commends itself to the teacher. She may wish to adapt the order of topics to the special interests of the girls, or to the order of topics in some other department. A satisfactory arrangement might be to study first the topics that relate primarily to the home itself, and then those that are concerned with the needs of the persons within the home.

According to this plan, the section on shelter would follow budget-making. The problems which, according to the criteria, may be included in this section involve the upkeep, but not the actual construction, of the house. They include taking measurements for repairs, drawing to scale, reading builders' plans, making estimates for such repairs as laying floors, painting, and papering. In all these problems the actual methods of practical builders are used, not with the purpose of teaching the girls to be contractors, but in order that they may understand how such estimates are made and be able to judge the value of repair work.

It might seem that other problems should be included here, but all problems that involve complexities of technique peculiar to the building trade are omitted, both because they are outside the actual experience of the girls and because they offer too many difficulties in relation to their value.

The next topic, operation, follows naturally after shelter because the problems are concerned with the home itself. There are problems in estimating the cost of mattings and linoleum, in finding the relative cost of gas and electric appliances, such as irons, vacuum cleaners, and the comparative cost per candle-power of different kinds of gas and electric lights. It may be asked why coal and wood are omitted from the study of fuels. This is because the lack of practical standards of measurements, the loss of heat caused by radiation, and other complicating factors make the problems unsuitable for a general course. Problems in the installation

Digitized by Google

of heating and ventilating systems are outside the immediate experience of the girls, and their technical difficulties are too great in relation to their value. Problems with regard to laundry lack sufficient reliable data. Problems in the purchase of house furnishings are omitted because the arithmetic involved is too simple in comparison with the complex sociological considerations involved.

After the budget divisions of shelter and operation have been completed, the attention shifts to the more personal needs of those within the home. The first of these needs to be considered is that of clothing. Problems connected with clothing include the estimation of the amount of material needed for garments, and also economical methods of purchase. First of all the girls learn not to talk about buying thirteen inches of material, but three-eighths of a yard; not to talk about buying five-sixths of a yard, but three-fourths or seven-eighths. Eights and quarters are the trade measures, and the girls must learn to use them if they are to achieve any degree of skill in making their arithmetic serviceable in every-day life.

Then the girls learn how to estimate the allowance to be made for tucks and hems; the amount of material needed for ruffles, plaitings, bias trimmings, and for completed garments. The use of the bias brings in an element of difficulty that demands special consideration. Perhaps it is not necessary to state that a bias line of cutting is the diagonal of a square whose side is the width of the goods. Needless to say, the dressmaker does not find the length of a bias strip by means of square root, but by the practical rule that the bias line of cutting is approximately four-thirds of the width of the goods. Many problems in the use of the bias which are too complicated to admit of a simple arithmetical solution can be solved by means of various practical rules and devices. If, as is frequently the case, the material for trimming costs several dollars a yard, it is obvious that the ability to make accurate estimates may be a matter of more than academic interest even to the young girl whose chief concern in the subject is in its application to her girdles.

Problems with regard to the amount of material required for waists and for gored skirts depend upon the practical judgment

Digitized by Google

and experience of the dressmaker and are out of place in an arithmetic course.

In many respects the next topic in the course, that of food, is the most important as well as the most complex. Yet neither in the arithmetic nor in the technicalities of the subject-matter are the problems too difficult for young girls. The importance of proper feeding and the relation of food to efficiency are beginning to be understood as never before. Especially during the present crisis even young girls should know, not only the nutritive value of foodstuffs, but their relative cost.

This section begins with the alteration of recipes to serve a larger or a smaller number of persons. The girls learn through practice how to convert fractional parts of a cup to tablespoons, and how to state recipes in convenient household measures.

But in modern food economics the preparation of food for the table is only a small part of the study of food. Scientific feeding involves measuring the nutritive value of food. For this purpose the great calorie has been adopted as a unit of measure, since the three kinds of nutrients—proteins, fats, and carbohydrates—can be measured by their heat- or energy-producing capacity. The 100-calorie portion is used as a convenient unit in dietary planning. The girls are interested to find how much fuel they require per day according to various dietary standards. They learn how to compute the fuel value of foods from the government tables of the chemical composition of foods. They compute the weight of 100-calorie portions of common foods, and they learn to compute the fuel value of their own breakfasts and other simple meals.

But in these days of the high cost of living it is not enough to know how to find the relative value of foods as nourishment unless one also understands the relative cost of foods. The girls must know how to market to advantage in order to buy those foods that yield the greatest amount of nourishment while providing the needed variety. One way of bringing out this aspect of the problem is to study the relative amount of fuel that can be purchased for $1.00 in various kinds of foods. In this way the possibility of food substitution for the purpose of cheapening dietaries can be made clear. The use of food substitutes will have to be undertaken

Digitized by Google

by many families during the next few years, and there is every reason why girls should understand how it can be done scientifically.

A convenient way to estimate the cost of menus and dietaries and to make substitutions of cheaper foods is to use the cost per 100 calories as a basis of comparison. If a man needs 3,000 calories per day, and thirty cents is the allowance for food, it is obvious that he cannot get enough to eat unless the average cost of food is one cent or less per 100 calories. Practice in planning meals at a specified cost per day gives the girls some skill in the application of arithmetic to the daily routine of feeding the family on a budget allowance.

After the study of food it might be expected that the course would be continued to include the other topic in the budget—advancement, or higher life. But the problems that would have to be included in this section, such as mortgages, stocks, bonds, and the investment of savings, are obviously outside the experience of twelve- to sixteen-year-old girls, while problems involving the expenditure of money for leisure-time pleasures, for education, travel, music, books, entertainment, and for charity offer such comparatively insignificant arithmetic in contrast to the enormously significant social problems involved that they would better be considered in a social-science course.

The four budget divisions—shelter, operation, clothing, and food—together with a study of budgets and accounts, have thus been made to serve as an outline of the course, and an attempt has been made to select the problems from the everyday experience of the girls in such a way as to broaden their general education and give them skill in the application of arithmetic to practical situations.

The division of the course into separate topics makes it possible to teach each section as a separate unit when or where it is most needed by any group of girls. Another advantage of this method of organization of the subject comes from the fact that it insures frequent repetition of the various processes of arithmetic. All of the important processes are repeated over and over again in a slightly different application, so that the emphasis is placed naturally on those more frequently used from the very fact that they

Digitized by Google

occur more frequently in the problems. Take the subject of percentage for instance. Introduced first under the division of the income, it appears again when methods of purchase are studied with reference to the percentage of saving or the percentage of waste effected by buying in large or small quantities, by cash or credit, by accurate or inaccurate measures. The actual loss when more material is purchased than can be utilized is viewed, not only as a certain definite money loss, but also as a certain percentage of increase in the cost of the garment. The average increase in the price of commodities in the local stores during a certain period forms a basis for estimating the percentage of increase in the cost of living during the period. In this way the girls learn to use percentage in practical situations, and they acquire the habit of considering, not only actual numerical differences, but also relative differences.

Again, take the subject of graphs. Used at first to illustrate the different amounts to be allowed for each division of the budget, the graph appears merely as a new way of representing numbers, more or less interesting because of its novelty. But as the graphic method is used over and over again in each section of the course to represent many different kinds of relations and comparisons, it begins to assume increasing importance, until the girls realize what a valuable tool it may be in bringing out the relative importance of facts whose significance is sometimes lost when stated in abstract numbers.

The actual arithmetic used in the problems may be briefly summarized as follows: common fractions, usually quarters, halves, thirds, and sixths; decimal fractions and approximations; aliquot parts of 100; percentage; proportion; and graphs. It is assumed that the girls have already studied these processes in the elementary school, and that they are ready to acquire skill in their application to practical problems.

One other matter remains to be considered—the teacher. In what department should such a course be taught? Can a teacher of mathematics be expected to understand the subject-matter sufficiently well to teach problems in scientific dietetics, in sewing, and in budget-making? Or can a teacher of household arts be

Digitized by Google

expected to understand methods of teaching mathematics well enough to do this work effectively? Perhaps these questions will have to be answered differently in different schools. One thing, at least, is certain—the course should be taught by someone who is in sympathy with its purpose and who is sufficiently well informed to make the problems serve the ends for which they have been selected. It would be a pity to have the teaching done by a person who was so absorbed in the subject-matter that she failed to utilize the opportunity to develop skill in the use of arithmetic; on the other hand, it would be almost worse to have the teaching done by a mathematician who had no interest save in the mere number relations, and who cared only for correct results with little or no regard for the sociological implications of the subject-matter.

Digitized by Google

A COURSE IN SOCIALIZED HIGH-SCHOOL CIVICS

W. H. HATHAWAY
Riverside High School, Milwaukee, Wisconsin

Feeling the need for a greater socialization of the work in civics, we have introduced into Riverside High School a civics course which seems to us better qualified to answer the modern demand. The aim of the course is to develop within the pupil a social sense or, as so well expressed by Professor Dewey, "to develop the power of observation, analysis, and inference with respect to what makes up a social situation and the agencies through which it is modified." We devote the senior year to the course. Surveys of the various governmental and social agencies are made by the pupils either individually or in class groups. These surveys are particularly valuable as a part of our laboratory work. Each pupil keeps a notebook and a scrapbook of newspaper and magazine clippings on the subjects pertaining to the work in hand. The bibliography accompanying the following outline is not intended as an exhaustive list of references but to be merely suggestive of what we are doing. The character of the list is influenced by the limitations of our school library.

SEMESTER ONE

A. National Government
- I. The need for government
  - 1. Define government
  - 2. What does the government do for us?
  - 3. Show the necessity for the different departments of government
- II. The constitution
  - 1. What is a constitution?
  - 2. Why do we have a constitution?
  - 3. What was the origin of our constitution?
- III. Consideration of federal government
  - 1. The legislative department
    - *a*) The House of Representatives
      - (1) Composition and organization
      - (2) Legislative procedure

Digitized by Google

b) The Senate
(1) Composition and organization
c) Procedure in the House
(1) How is a bill introduced?
(2) Process of a bill through Congress
(3) Congressional customs
(Class organizes itself into a House for the consideration of bills)

2. Powers of Congress
a) Finance
(1) Constitutional provision
(2) Customs tariff
Principle of the protective tariff
The Tariff Commission
(3) Internal revenue
(4) Corporation and inheritance taxes
(5) Income tax
(6) Borrowing money
(7) Federal reserve banking system
National banks
Federal land banks
(8) Coinage of money
b) Commercial powers
(1) Constitutional provisions
(2) Navigation laws
(3) Government aid to shipping
Ship subsidy
Government ownership—shipping board
(4) Council of National Defense
Advisory commission and other subsidiary boards
(5) Food Administration
(6) Immigration
Regulation
(7) Interstate commerce
(8) Other commerce laws
Pure Food Law
Anti-trust laws
Trade commission
Embargo
Trading with the enemy
(9) Theory of government by commission
c) Naturalization
(1) Status of the family
(2) Connection with the immigration system
d) Prohibitions upon Congress

Digitized by Google

3. The executive
   a) Nomination—convention, presidential primary
   b) Election
      (1) Change in methods
      (2) Election by the House
      (3) Study of the election machinery
          Political parties
   c) Tenure of office
   d) Qualifications of president
   e) Presidential succession
   f) Powers and duties of the president
   g) Influence of the president
   h) Study of the Civil Service Reform
4. The Cabinet
   a) Constitutional provision
   b) Study of the modern cabinet
5. Judiciary
   a) Constitutional provison
   b) Supreme Court
      (1) Organization
      (2) Importance and influence
   c) Other courts and officers
   d) Jurisdiction
   e) How may Supreme Court decisions be overruled?
6. The government of the territories
   a) The constitution in the territories
7. Amendments
   a) Bill of Rights
      (1) Origin and circumstances of its adoption
   b) Remaining amendments
8. Nature of the federal government
   a) State vs. nationalistic view
   b) Implied powers
      (1) Constitutional basis
   c) The unwritten constitution
      (1) Influence of custom

References:

Ashley, R. L., *American Federal State*, pp. 525–30.
Beard, *American Citizenship*, pp. 3–8; 79–94.
———, *Readings in Government and Politics.*
Bryce, *American Commonwealth*, I, 32–37; 70–77; 142–53.
Cary, *Primer of the Civil Service and the Merit System.*
Congressional Record.
Hart, *Formation of the Union*, pp. 120–35.
James and Sanford, *Government in State and Nation*, Part II.

Digitized by Google

McLaughlin, *Confederation and the Constitution*, pp. 236–52.
McLaughlin and Hart, *Cyclopedia of American Government.*
National Service Handbook, Committee on Public Information.
Reinsch, *Readings in American Federal Government.*
Rules of the National House of Representatives.
Statistical Abstract, United States Government.
Wisconsin Blue Book.
World Almanac.

B. MUNICIPAL GOVERNMENT

I. Enormous growth of cities in the nineteenth century
   1. Causes for this growth
   2. New conditions developed by this growth
II. City government is complicated
   1. General plan of city governments in the United States
      a) Source of the city's power—the state
         How is state's power delegated?
   2. European city governments—a comparison
   3. Other forms of city government
      a) Commission government
      b) Commission-manager government
      c) Variations of these forms
III. How have municipal governments worked in this country?
   1. Forces opposing good government
   2. Municipal problems
      a) Public utility problem
      b) Municipal ownership
IV. Reform movements
   1. Municipal leagues
      a) Voters' League of Milwaukee
      b) City Club of Milwaukee
   2. Short Ballot League
   3. National Voters' League
   4. Civil Service Reform League

References:

Beard, *American Citizenship*, pp. 242–70.
———, *American City Government*, pp. 31–51.
———, *Readings in American Government and Politics.*
Bryce, James, *American Commonwealth*, I, chaps. l, li, lii.
Charters and publications of the commission and commission-manager cities.
Fiske, John, *Civil Government of the United States*, pp. 104–10.
Howe, F. C., *The Modern City and Its Problems*, pp. 67–85.

Digitized by Google

James and Sanford, *Government in State and Nation*, chap. xxvi.
Story of the Short Ballot Cities, Publication of the Short Ballot Organization.
Woodruff, C. R., *Merit System in Municipalities.*
Zueblin, *American Municipal Progress*, pp. 87–94.

V. Study of Milwaukee city government
  1. The city's history
     a) The physiographic features
     b) The rivalry of the three original settlements
     c) Incorporation and combination
  2. Population
     a) Nationalities
     b) Occupations
  3. Government
     a) Origin of the present charter
     b) Study of the executive, legislative, and judicial departments
     c) Administrative departments
     d) Social welfare work of the city
        (1) Health department
            Divisions of education, child welfare, tuberculosis, sanitation, etc.
        (2) Sanitation
            Water supply, street cleaning, ash and garbage collection and disposal, the sewer system
        (3) Police department
        (4) Fire department
        (5) Education—school administration
            Industrial education, continuation schools, social centers, playgrounds
  4. General discussion of Milwaukee government
     a) Agencies for improvement
        (1) Bureau of Municipal Research
        (2) Citizens' Bureau of Municipal Research
        (3) City Club
        (4) Local civic societies
        (5) Voters' League
     b) City problems
        (1) Street lighting
        (2) City planning
            Closing of the river
        (3) Civil Service Reform
     c) Individual investigations by pupils of various activities of the government
        Original drawings by pupils on planning of city

Digitized by Google

References:

Charter of the city of Milwaukee.
Civil Service in Milwaukee, City Club Pamphlet.
"City Planning in Milwaukee," Dr. Werner Hegemann, Bulletin of City Club.
Constitution of Wisconsin.
Current articles in the *American City* and other magazines.
Manual of the Milwaukee Common Council.
Preliminary Survey of Milwaukee, New York Bureau of Municipal Research.
Proceedings of the Common Council.
Publications of the City Club, Voters' League, City Planning Commission, Sewerage Commission, City Service Commission.
Report of the Engineers' Society of Milwaukee, Final Report on Milwaukee River Investigation.
Reports of the various departments of the city government.
Statutes of Wisconsin.
The Government of Milwaukee, mimeographed descriptive sheets prepared by the department.
Taft, W. H., "Washington" (City Planning), *National Geographic Magazine*, March, 1915.

C. Local Government

I. The township
  1. Origin of the township in America
  2. Western modification
  3. Composition and government of a Wisconsin township
II. The county
  1. Origin of the American county
  2. Composition and government of a Wisconsin county
  3. Milwaukee county—area and population
    a) Study of legislative, executive, and judicial departments
    b) Problem of administration
      (1) The county institutions
    c) Other problems of the county
      (1) The short ballot
      (2) The civil service

References:

Beard, *American Citizenship*, pp. 271–86.
———, *Readings in American Government and Politics.*
Bryce, *American Commonwealth*, I, chaps. xlviii, xlix.
Civil Service in Milwaukee County, Bulletin of City Club.
Clelland, "A Court That Prevents Criminals," *World's Work*, June, 1915.
Constitution of Wisconsin.

Digitized by Google

Hart, *Formation of the Union*, pp. 11–13.
James and Sanford, *Government in State and Nation*, chap. i.
"Merging of City and County Governments," Bulletin of City Club.
Pamphlets of City Club, Civil Service Commission, County Board of Administration, Board of Supervisors.
Statutes of Wisconsin.
The Government of Milwaukee County, mimeographed sheets prepared by the history department.

D. STATE GOVERNMENT

I. Origin of the state constitutions
  1. Study of colonial governments
  2. Influences determining the type
  3. How are constitutions made?
  4. Analysis of the constitutions
II. Study of constitutions
  1. The legislature
    a) Historical development
    b) Modern tendencies
    c) Restrictions upon legislature
    d) Procedure in the legislature
    e) Scope of state law
    f) Is uniformity of state law desirable?
  2. The executive
    a) Power of the governor
      (1) Present tendency
  3. Judicial department
    a) Organization of the courts
    b) Relation of courts to one another
    c) Tenure of office
    d) Appointment vs. election of judges
  4. Discussion of the working of state government
    a) The short ballot in the state
    b) Government by commission
    c) The Wisconsin idea

References:
Ashley, *American Federal State*, pp. 422–37.
Beard, *American Citizenship*, pp. 121–28.
———, *Readings in American Government and Politics*.
Bryce, *American Commonwealth*, chaps. xxxiv, xxxix, xliv, xlv.
Fiske, *Critical Period*, pp. 230–305.
Hart, *Formation of the Union*.
James and Sanford, *Government in State and Nation*, chap. xxiii.
Larned, *History for Ready Reference*.

Digitized by Google

McLaughlin and Hart, *Cyclopedia of American Government.*
Reinsch, *Readings in American Federal Government.*
Statesman's Yearbook.

III. Wisconsin government
  1. General survey of the constitution
    a) Analyze according to plan laid down by James and Sanford
    b) Legislative department
      (1) Composition
      (2) Organization and procedure
    c) Executive
      (1) Governor
        Legislative, executive, and judicial power
      (2) Lieutenant-governor
      (3) Other elective officers
        Secretary of state, treasurer, attorney-general, superintendent of public instruction
      (4) Administrative officers
        The commissions and their theory
    d) The judiciary
  2. Taxation in Wisconsin
    a) Theoretical study of taxation
    b) Taxation of public utilities
    c) Income tax
    d) Inheritance tax
    e) Local taxation
    f) Federal taxes

References:
Beard, *Readings in American Government and Politics.*
Bullock, *Readings in Public Finance*, pp. 630–41.
Howe, *Wisconsin, an Experiment in Democracy.*
McCarthy, *The Wisconsin Idea.*
Preliminary Survey of Milwaukee, New York Bureau.
Reports of Wisconsin Board of Control, Board of Regents, and other commissions and boards.
Statutes of Wisconsin.
Wisconsin Blue Book.
Wisconsin Constitution.
Wisconsin Tax System, mimeographed sheets prepared by the department.

SEMESTER TWO

A. CONSERVATION
  I. Conservation of the natural resources
    1. How have they been dissipated?
    2. What measures of conservation have been proposed?
    3. What has been accomplished?

Digitized by Google

II. Conservation of plant life
  1. What has been the characteristic of American farming?
  2. Why is this becoming a problem?
  3. What measures of conservation have been suggested?
  4. What is our responsibility?
  5. Backyard-garden movement
  6. Conservation of foods

III. Conservation of animal life
  1. Importance in the problem of food supply
  2. Causes for depletion
  3. Conservation measures

IV. Conservation of human life
  1. What is the importance of a human life?
  2. Why should we as a class be interested in the life of a workman whom we know not?
  3. Why is community health "a civic obligation"?
  4. What is being done locally and nationally in this field?
  5. Special study of sanitation in Milwaukee
  6. The "safety first" movement
  7. Industrial diseases
  8. Infant mortality

References:

Allen, *Civics and Health*, pp. 3–44; 283–328.
Beard, *Readings in American Government and Politics*.
Bogart, *Economic History of the United States*, pp. 1–15; 523–37.
Brigham, *Geographical Influences on American History*.
Burkitt, *Cotton*, p. 175.
Commons, *Trade Unionism and Labor Problems*, pp. 435–53.
Doudlinger, *The Book of Wheat*, pp. 148–87.
James and Sanford, *Government in State and Nation*, pp. 284–85; 85–87.
Lessons in Community and National Life, U.S. Bulletin.
Mathews, "High School and the Tussock Moth," *American City*, October, 1917.
Merrill, *Industrial Geography of Wisconsin*, pp. 82–91.
National Service Hand Book, United States Government, pp. 63–86.
Nelson, "Rat Pest," *National Geographical Magazine*, July, 1917.
Publications of the United States Department of Agriculture.
Proceedings of the Governors' Conference, 1908.
Reinsch, *Readings in American Government and Politics*.
Reports of the Wisconsin Industrial Commission.
Spargo, *Common Sense of the Milk Problem*, pp. 120–50.
Statistical Abstract, United States Government.
Towne, *Social Problems*, chaps. i, xv, xvi, xvii.
Van Hise, *Conservation of the Natural Resources*.
Wisconsin Blue Book, pp. 2–33.

Digitized by Google

B. THE FAMILY

I. The importance of the family
   1. Heredity and its influence
   2. Environment
II. The ideals of the family
III. Influences which affect the stability of the family
   1. New economic conditions
   2. Different social standards
   3. Marriage and divorce problem
      a) Suggested remedies

References:

Allen, *Civics and Health*, pp. 203, 335.
Beard, *American Citizenship*, chap. iii.
Ellwood, *Sociology and Modern Social Problems*, pp. 135–67.
Encyclopaedia Britannica, art. "Heredity."
Jewett, *The Next Generation*, pp. 7–80.
Statistical Abstract, United States Government.
World Almanac.

C. THE UNFORTUNATE

I. Poverty and pauperism
   1. Definitions
   2. Causes
   3. The liquor problem
   4. Remedies

References:

Beard, *American Citizenship*, pp. 228–32.
Ellwood, *Sociology and Modern Social Problems*, pp. 283–309.
Encyclopedia Britannica, art. "Housing."
Hunter, *Poverty*, chaps. i, ii, iii, iv.
International Encyclopedia, art. "Housing."
Report Immigration Commissioner, "Living Conditions in Milwaukee."
Reports by pupils on city, county, and state institutions which administer to the poor.
Reports Milwaukee Board of Health.
Riis, "In the Slums," *American History of Contemporaries*, IV, 654.
Towne, *Social Problems*, chaps. xiii, xiv.

II. Mental defectives
   1. Feeble-minded
      a) The backward child
      b) Classes of feeble-minded
      c) Education and care
   2. The insane
      a) Prevention and treatment

Digitized by Google

References:

James and Sanford, *Government in State and Nation*, pp. 72–73.
Jewett, *The Next Generation*, chap. xxv.
Reports of city, county, and state institutions for the care of mental defectives.
Towne, *Social Problems*, chap. x.

III. The criminal
1. Definition of crime
2. Classification of criminals
3. Cost of crime
4. Modern attitude toward the criminal
5. Prevention of crime
6. The reformation of the criminal
a) Probation, indeterminate sentence, cumulative sentence, parole, pardon
7. Prison labor
8. The juvenile offender and his treatment

References:

Beard, *American Citizenship*, pp. 222–25; 248–51.
James and Sanford, *Government in State and Nation*, chap. viii.
McLaughlin and Hart, *Cyclopedia of Government*.
Reports of the Wisconsin Board of Control.
Survey and other magazines on care and treatment of criminals.
Towne, *Social Problems*, chap. xi.

D. The Labor Problem

I. Population
1. Causes of increase
2. Distribution
3. Race and nationality
4. The negro problem

II. Immigration
1. Causes and effects
2. Regulation and distribution

III. Child labor
1. Causes and resulting evils
2. Regulation and prevention

IV. Woman labor
1. Female vs. male
2. Effect of this competition
3. Remedial measures proposed

V. Labor organizations
1. History of the movement

Digitized by Google

2. Unions
   a) Classes
   b) Influence
      (1) Social, economic, political
3. Closed shop vs. open shop
4. Collective bargaining
5. Strikes
6. Arbitration

VI. Labor legislation
1. Safety and comfort of employees
2. Wages; minimum wage laws
   a) Sweat shops
3. Hours of labor
4. Courts, injunctions, etc.
5. Industrial education
6. Labor bureaus
7. Employers' liability and workingmen's compensation
8. Insurance
   a) Unemployment
   b) Health
   c) Life
9. Pensions

References:

American Labor Legislation Review, "Unemployment," June, November, 1916.
Antin, Mary, *The Promised Land.*
Beard, *American Citizenship*, pp. 10–19; 195–97.
Bogart, *Economic History of the United States*, pp. 472–505.
Bullock, *Selected Readings in Economics*, pp. 589–612.
Commons, *Trade Unionism and the Labor Problem*, p. 546.
Ellwood, *Sociology and the Modern Social Problems*, pp. 197–229.
Howe, "Turned Back," *Survey*, May 6, 1916.
Hunter, *Poverty*, pp. 261–317.
James and Sanford, *Government in State and Nation*, chap. xi.
Lessons in Community Life, No. 4, p. 11; U.S. Bureau of Education.
Marshall, Wright, and Field, *Materials for the Study of Economics*, pp. 709–15; 144–46.
"Our Foreign Born Citizens," *National Geographic Magazine*, February, 1917.
Reinsch, *Readings on American Federal Government.*
Report of Bureau of Labor and Industrial Statistics, Wisconsin, 1911–12, Newsboys of Milwaukee.
Riggs, "Italy, the Gifted Mother of Civilization," *National Geographic Magazine*, October, 1916.
Towne, *Social Problems*, chaps. ii, iii, iv, v, vi, vii, viii.
Wood, "A Strikeless State," *Saturday Evening Post*, March 18, 1916.

Digitized by Google

Do the pupils respond to the second semester's work? The result is most gratifying indeed. It has opened virgin fields of thought for these young people that we hope will be productive of good results and be of lasting influence. It is moral instruction of a most practical type. The classes are interested and appear to appreciate the value of the work. When the class resolves itself into a civic club with a pupil in the chair for the discussion of some vital topic, it is sometimes difficult to secure an adjournment. Let me quote from comments and suggestions upon our classwork which the pupils have written and handed to the teacher from time to time. Nearly all of the students taking the work avow that it is the most interesting study that they have taken in the high school. Says one: "We get into a rut by living our own lives and not showing an interest in the social evils which surround us. If civics were made compulsory, we would not have the conditions in Milwaukee which Mr. X (a social worker) told us about." Another: "I feel that I learn something every day that helps me to understand those who are less fortunate than I. It gives me a broader sense of life and the responsibilities that we have. I feel that something ought to be done by everyone to help these conditions." And still another: "It has made me think. The majority of the good derived from this study is to come from within us, not from books." This boy of his own accord exactly expressed our aim: "The good derived must come from within." It is not our object to have the boys and girls store away a mass of facts but to establish for themselves a viewpoint from which they will get a vision, healthy and wholesome, of their responsibility and duty to society.

NOTE.—Good bibliographies on social questions may be found in Ellwood, *Sociology and the Modern Social Problems*, and in Towne, *Social Problems*. An excellent discussion on the teaching of community civics will be found in Bulletin, No. 28, 1916, United States Bureau of Education. A further bibliography may be found in the *Circular of Information*, No. 5, Massachusetts Board of Education.

Digitized by Google

EDUCATIONAL NEWS AND EDITORIAL COMMENT

The Johns Hopkins Studies in Education

The Johns Hopkins University announces the establishment of a new publication entitled "The Johns Hopkins University Studies in Education." This publication will include monographs presenting the results of investigations conducted at the University or elsewhere which, because of their importance, should appear as separate units and at once. The "Studies in Education" are edited by Professor Edward F. Buchner, with the co-operation of Dr. C. Macfie Campbell, and published by the Johns Hopkins Press, Baltimore, Maryland.

The Correlation of Abilities of High-School Pupils (100 pp.) by Dr. David Emrich Weglein, and *Experimental Study of Motor Abilities of Children in Primary Grades* (62 pp.) by Dr. Buford Jennette Johnson, Nos. 1 and 2, respectively, of the "Studies," have just appeared.

The Gary System in New York under Fire

The recent election in New York appears ominous for the Gary system inaugurated under Mayor Mitchell's administration. Hylan, the successful Tammany candidate, very frankly made the experiment a campaign issue, attempting to foment opposition among the more ignorant classes of citizens. The extreme pettiness of the prejudice stirred up is illustrated by the exclamation of a German-American mother, "We want our kinder to learn mit der book, der paper, und der pencil, und not mit der sewing und der shop." Stupidity of this sort is supplemented by stirring up the children themselves, who object, even with school riots, to remaining one hour longer in school. To indicate the depths of contemptible opposition to which have sunk men who ought to know better, we may cite the argument often made by stump speakers that the Gary system is intimately associated with Judge Gary, of the steel corporation. This false statement was used to induce the belief that the Gary system of schools is foisted upon the working classes as some additional form of exploitation in favor of the moneyed class. When the campaigners did present anything like creditable opposition,

Digitized by Google

they seized upon schools which had made the experiment in untoward circumstances, or which, because of lack of equipment, had been compelled to give the system a half-trial.

We are for the moment making no attempt to defend the Gary system as suitable for New York City. However, an interesting feature frequently brought out in the campaign is the almost unanimous approval of the principals and teachers who have conducted the work. Assembly room, library, gymnasium, swimming-pool, playgrounds, laboratories, shops, and many other features of school equipment are making their impression on the educational staff. They are realizing, even if ignorant parents fail to see, that a school must be a place in which pupils live as well as learn, must be a place in which children come in contact with educational values through participation in miniatures of life-activities as well as through books. It is this central feature of the Gary system, certainly in line with the most progressive educational thought of the day, that every friend of progress would grieve to see swallowed up as one delicate morsel by Tammany.

Current Practice in City School Administration

In the convenient form of government *Bulletin*, 1917, No. 8, of the United States Bureau of Education, data are presented concerning the current practices in school administration of cities of over 25,000 population. In cities having between 25,000 and 100,000 population the number of board members ranges from 3 to 21, median 7. In cities of over 100,000 the range is between 4 and 46 with the median 9. Following is the distribution:

1	city	4 members	1	city	14 members
11	cities	5 "	4	cities	15 "
3	"	6 "	1	city	21 "
8	"	7 "	1	"	30 "
9	"	9 "	1	"	46 "
5	"	12 "			

The bulk of American cities show the following practices:

1. Of the boards 79 per cent are elected, 16 per cent appointed by mayor, 5 per cent by council or commission.

2. Only 11 per cent of the cities retain the system of election or appointment by wards.

3. Median tenure of office is four years.

Digitized by Google

4. Only 15 cities compensate their school-board members; in many of these cases the amount is small. San Francisco, a notable exception, pays its four commissioners $3,000 each.

5. It is the general practice for the school board to refer new items of business to committees. This plan is followed by 37 of 39 cities of over 100,000 and 104 of 121 cities between 25,000 and 100,000 population. The average number of standing committees is five; the median number of members per committee three.

6. The city treasurer acts for the school board in 31 cities over 1,000,000, and in 76 of those below.

7. In the selection of teachers in cities over 100,000: in 9 cities the superintendent appoints; in 17 he recommends; in 9 he nominates either one teacher or a list; in 2 he has equal voice with a committee. In cities below 100,000: in 53 cities superintendent recommends to a committee; in 35 he nominates; in 23 he appoints; in 16 he advises; in 1 he has no power; in 1 he passes on qualifications.

8. Probationary periods for teachers are common: 29 out of 39 cities reporting mention this provision; 16 cities have probation periods of one year; 7, three years; 4, two years; 1, five months; 1, four months. Of 129 cities over 100,000, 70 provide for probationary appointment; 13, less than 1 year; 38, one year; 10, two years; 7, three years; 2, four years.

Night Schools

In spite of, possibly because of, the fact that many thousands of men have been summoned into military service, never before has a November reported such nation-wide interest in night schools. Two classes of adult citizens seem to be drawn by the need of additional training: first, the women of the land who are taking to heart the conservation program of Mr. Hoover's department; secondly, the young men and women not yet directly in the national service who feel the need of being additionally prepared for the demands and opportunities of the next few years.

A ringing editorial in the *Dayton* (Ohio) *Journal* admirably expresses the spirit that lies back of the far-spread advance upon the opportunities of the night school. Under the title, "Dayton Going to School," the *Journal* says:

> Announcement that attendance at the Dayton night school is now two thousand, the largest in the history of the institution, is most encouraging. It indicates a healthful desire on the part of those whose youthful elementary education has been curtailed to make up for the deficiency; but, of even greater importance, it suggests that the public in Dayton is desirous of co-operating

Digitized by Google

heartily with the national government in its repeatedly expressed admonition that, at least during the period of the war, every individual who possibly can do so should fit himself for advanced and varied service.

There is at present no means of knowing what service may be required of any of us, or what knowledge may be of value to us individually and to the government later on. It may be needed before the war ends or it may be incidental to the restoration of peace when America certainly will marshal its vast industrial armies.

In any event the schooling can do no one harm whether the government does or does not find a need for our services along the new line of preparation. Knowledge gained in the night school has spelled success for many an individual. It means better employment, higher pay, more happiness, a greater appreciation of the good things of life, and a life of greater usefulness.

Three facts stand out most clearly. A very large majority of night-school students are adults. In Fargo, North Dakota, a small city, out of 320 enrolled in one school 277 are twenty-one years of age or more. The night school is distinctly an adult school. The second fact is the intense practical nature of the work. Typewriting, stenography, chemistry, bookkeeping, French, manual training, higher mathematics, predominate. In short, trade or vocational training of an intensified character makes up the bulk of the curriculum. The third fact is that our foreign-born citizens appear to be most eager for the opportunities. Salt Lake reports in one night school of 200 registration 35 different nationalities. Naturally English for this group is the most widely popular study. Our night schools are one of the means by which we can point forward the civilization of our many races into one race. Moreover, the country over, cities are emphasizing the fact that the extension classes are part of their response to the needs of the hour. As Grand Rapids, Michigan, aptly puts it, the night schools opened, "responding to an appeal from Uncle Sam." For 1916 there are records of 1,700 towns and cities, representing every state in the Union, which maintained night classes. For 1917 the word comes from Washington that "the opening of this year's classes is accompanied by every indication of greatly increased attendance and a material betterment of the results already obtained through this stupendous educational campaign."

Save the Social Centers

The *Chicago Evening Post* prints the following argument in favor of social centers:

Doubtless the school board finds the problem of fuel supply as difficult of solution as it is proving to everybody else, but the plan of the chief engineer

Digitized by Google

to economize by closing up the school social centers is of very questionable expediency, to say the least.

The social center is quite as useful and necessary a factor in our community life as the school itself, and at no time were its activities more desirable than now. The task in which the nation is engaged requires that we shall not merely conserve but extend in every possible way all agencies that foster the community spirit and contribute to intelligent, contented citizenship. Never have men and women needed the sense of fellowship, of common interest, and the opportunity to express it more than they do today.

The school is the natural rallying-place for the neighborhood. It belongs to the people. Beneath its roof all racial, social, and creedal distinctions are merged in the commonality. There is no other institution of which this is true. To close the social centers would be a sin against the democracy for which we are fighting, a blow at the morale of our people, a subversion of community efficiency at the time when it is vital to maintain efficiency.

As the social center has developed in Chicago's schools, under the direction of men and women of vision and social spirit, it has become far more than a neighborhood recreational opportunity. It is an educational agency of greatest value. It is a promoter of intelligent patriotism, an antidote for disloyalty and sedition. It cultivates Americanism. Close the social centers and you extinguish so many fires beneath the great melting-pot of our heterogeneous citizenship; you check the fusing process so essential to the strength of our national life.

Much of self-sacrificing labor has gone into the building up of the social centers in Chicago schools. No labor has been more fruitful for good. The undoing of this excellent work is not to be considered while there is any other way to meet the emergency. Chicago needs it and the nation needs it. Thousands of men and women, boys and girls, will suffer hardship if deprived of its advantages. The school board should instruct its chief engineer to discover some less costly method of economizing.

School Buildings Belong to the Public

From Denver comes the cheering word that Superintendent Cole has convinced the Board of Education that school buildings belong to the public and are capable of serving the public in the evening as well as during the day. Many a school board has been reluctant to allow gatherings of citizens the free use of school buildings. Forsooth light and heat and janitor services for night meetings often might amount to a serious consideration. At the present moment this condition is threatening the well-established social centers of Chicago. In some communities a sensible procedure might be to charge bare expenses; but it seems incredible to think that a municipality cannot afford to provide free of cost suitable gathering-places. Parks and playgrounds

Digitized by Google

are part of our municipal programs for maintaining the health of our people. By what stretch of logic is it possible to deny the need for the same purposes of municipal halls and lyceums? Far from being discouraged in the desire to utilize school plants, citizens should be urged to make use of their own property, the public schools. No new building should be erected unprovided with an easily accessible, comfortably furnished public meeting-place. As in Denver, any reputable body of citizens ought to be able to petition for the use of the auditorium. In that city three taxpayers, who become guarantors for the safe-keeping of public property, apply for the hall. An assistant superintendent of schools approves the petition, or rejects it, upon suitable grounds. Denver has gone the limit of liberality, extending to her people the use of these public halls free of expense.

War Saving on Method of Ordering Textbooks

Earlier ordering of school textbooks by boards of education offers a fruitful field for saving in war time, according to Henry P. Kendall, of the Plimpton Press. If school boards can arrange to adopt school texts before January first, asserts Mr. Kendall, instead of waiting until the end of the school year in June, a large saving in the bookbinding trade will result. Ordering school textbooks earlier in the year will, it is declared, help to regularize employment in the schoolbook trade, making uniform hours of work and rates of pay possible throughout the year. In one plant at the present time the hours of labor so vary between winter and summer that, on a basis of 100 per cent as the flat weekly wage, operators during the summer months, because of overtime, earn about 130 per cent and during the winter months about 60 per cent. The workers are obliged to work very long hours in the summer time and to go without vacations.

Earlier ordering of schoolbooks will also conserve human energy, because it will make it possible to run a factory with a minimum number of employees; it will save machinery, because less will be required to produce; and it will save coal in conserving the heat, light, and power. Furthermore, the efficiency of the plant can be greatly increased where work is uniform in quantity, and the cost of production is much less in a plant where the product is produced more uniformly. As a result of Mr. Kendall's suggestion the Commissioner of Education has written to every city school board in the country asking whether it will not be possible hereafter to order schoolbooks before the first of January.

Digitized by Google

Supervised Study

Questionnaires submitted to high-school pupils are always of doubtful value. W. M. Proctor, of Leland Stanford Junior University, has collected replies from 1,661 pupils of the Pacific Coast, who indicate that they spend an average of 95 minutes a day in school study and 68 minutes a day in home study. Apparently these data were derived from schools few of which maintain any form of supervised study. Mr. Proctor then undertook to canvass the schools which provided for a lengthened school day and resulting supervised study periods. Replies were received from 42 schools; 31 report the lengthened period divided as follows:

(*a*)	60′	period,	divided	30–30,	No. of	cases	3	
	60′	"	"	35–25,	"	"	1	
	60′	"	"	40–20,	"	"	15	
	60′	"	"	45–15,	"	"	1	
	63′	"	"	33–30,	"	"	1	21
(*b*)	70′	"	"	40–30,	"	"	4	
	70′	"	"	35–35,	"	"	2	6
(*c*)	80′	"	"	40–40,	"	"	1	1
(*d*)	85′	"	"	45–40,	"	"	2	2
(*e*)	90′	"	"	45–45,	"	"	1	1
	Total.....							31

Of the remaining eleven schools six employ a study coach; two have special conference periods, where teachers meet all the pupils who are taking work under them for help and direction in their studies, and three have some special method of administering the Study Hall.

Testimony of principals is somewhat divided, though generally favorable to the plan: 26 principals said that study habits have been improved; 2 said that only the slow students have been helped, while the brighter ones have not; 22 said that home study has been greatly reduced; 4 could see no change; 25 said that pupils and teachers co-operated heartily; several said that teachers talked too much during the study periods. Mr. Proctor continues:

Wherever the plan had been in use long enough to make possible the compiling of statistics as to the effect of supervised study on scholarship there was practically unanimous agreement that the number of failures had been reduced and the standards of scholarship had been raised. The high school at Snohomish, Washington, reports that the average percentage of failures in elementary algebra for the two years prior to the adoption of supervised study was 28 per cent. But for the two-year period following the adoption of super-

Digitized by Google

vised study the failures in the same subject were reduced to 17 per cent. Hoquiam, Washington, reports that the average marks of the students range 10 per cent higher and that the number of honor pupils has been doubled since supervised study was introduced. The principal of the Arcata high school, California, reports that the average mark of the Freshman class has been raised from 78 per cent to 82½ per cent during the first year of supervised study. Santa Cruz, California, comparing the year 1914–15, the last under the old plan, with the year 1916–17, the second year under supervised study, finds that the increase in the total number of high marks has been 157 per cent, the decrease in low marks 230 per cent, and the decrease in failures 188 per cent. Reno, Nevada, reports a decrease of 45 per cent in the number of failures and an increase of 24 per cent in the number of students making excellent marks.

The Rapid-Advancement Class

In the September issue of *Educational Administration and Supervision* Miss Eva L. Mulrey, of Cambridge, Massachusetts, describes a method by which the schools of that city make provision for the rapid advancement of specially gifted pupils. A combination group of fourth, fifth, and sixth grades receives pupils from the third; a combination group of sixth, seventh, and eighth receives pupils from the fifth. The two combination groups are not tried in the same district in any one year. From all the fifth grades of any one district the group of thirty pupils are selected, and upon them their rare opportunities are impressed. Miss Mulrey says: "These children are of necessity as nearly perfect, physically, mentally, and morally, as we can imagine. No child is admitted who is not 'A-1' in conduct. He may not be perfect in arithmetic, but he may excel in English. He may not spell correctly every word, but he may do excellent work in history."

The course of study which is given rapid-advancement classes is characterized by the comparative absence of drill. Little drill is necessary because the children are very quick to see, to comprehend, and to retain. Incidentally this fact brings home the enormous waste of time for bright pupils who keep pace in grade promotions with their slower fellows. A second feature of the curriculum is the elimination of what Miss Mulrey calls "frills." Music, manual training, and drawing are given little prominence. Nature-study is correlated with geography, physiology with hygiene and science, and all of these courses supply abundant opportunities for exercises in oral and written expression. The special group is kept together for two years, thus passing from the fifth grade to the first year of high school in two years.

Digitized by Google

The experiment is interesting and will bear observation. At present it seems not unfair to say that the rapid-advancement class, with its difficulties of administration, with its resultant hard feelings and heartaches, with its depressing effect of loading upper grades with slow pupils, is but a cumbersome device. The saving of one year for the brighter pupils, or even two years by semiannual promotions, or, still better, by promotions at unstated intervals, appears to be a much more sensible program. However, the motives of economy of time for pupils and economy of teaching energy are so necessary of attainment that experiments to secure these ends ought to be multiplied.

Co-operation with Latin-American Universities

One inevitable result of the world-war will be a closer drawing together of North and South America, the various nations realizing that America for Americans must be ever more vigorously maintained. Early this year a committee of the American Association of University Professors sent a letter to fifty-nine universities of the United States and to twenty universities of Latin America proposing the establishment of exchange professorships, the establishment of fellowships, and a program of scientific co-operation between the institutions of the two Americas.

Although the war has for the moment introduced an element of uncertainty in university finances, seven institutions in the United States have signified their readiness to co-operate next year. The University of Illinois has established an exchange assistantship with Chile; the University of Indiana, a docentship open to all Latin America. Leland Stanford Junior and Clark universities offer liberal scholarships, while many other institutions promise to give special consideration to applicants of merit from South America.

Up to the present, shortness of time has allowed plans to be formulated by only four institutions in the other America. The National University of Chile, the University of Buenos Aires, the University of Tucuman, and the University of Honduras all welcome the proposal with gracious thoughts of compliance. The committee of the Association of University Professors through its chairman, Mr. L. L. Rowe, modestly referring to the at present scanty results, expresses a hope that the proposals may not be allowed to languish. It is indeed fitting that the leading institutions of learning in the twin Americas shall at once begin to promote acquaintance and cement the friendships among all nations of the Western Continent.

Digitized by Google

EDUCATIONAL WRITINGS

I. HOW TO KEEP IN TOUCH WITH THE QUANTITATIVE LITERATURE OF EDUCATION

H. O. RUGG
University of Chicago

The outstanding characteristic of education as it has developed in the last fifteen years is found to be a general acceptance of the quantitative method by school men. As education has become more and more a scientific profession, it has been recognized that the success of the school man is determined most largely by the degree to which he keeps in touch with the quantitative tools. To the school administrator and teacher the most necessary tools of the day, aside from classroom and school experience, are acquired by keeping up to date with the quantitative literature in education.

This quantitative literature is multiplying more rapidly than the teacher or superintendent interested in the general field of education can hope to keep in touch with it. We recognize clearly today that we must select our field of interest, and we find that, even when doing so, it requires unusual efforts to keep acquainted with what is coming out in school report, magazine, monograph, and book.

Agencies which are equipped to acquaint the school man with this rapidly multiplying literature must take upon themselves more and more actively the carrying out of this function. It is the purpose of the following discussions to put into the hands of school people a systematic method of keeping in touch with the quantitative literature of the day. It may be said at this point that the review editors of these journals will attempt to keep this particular device up to date from year to year and thus place at the disposal of the school man an ever-ready tool to help him in staying abreast of the times.

A. THE NECESSITY FOR WELL-SELECTED BIBLIOGRAPHIC MATERIAL

The student who wishes to attack the solution of any new problem in education faces first the task of mastering what has been done by others in the same field. His first need is that of a well-selected bibliography in his particular field. Most bibliographies covering the general field of education, or even of its more important subdivisions, contain material which has not in all cases been properly evaluated. The student wishes to know, out of the hundreds of studies which have been made in his field, which ones will be most helpful

Digitized by Google

to him in starting upon his problem. One of the characteristics of the recent movement in education is that school men have more and more turned to this task of making systematic evaluations of bibliographic material and have reported these in connection with their books or original studies in the particular fields. The tendency recently has been to give the reader a selected and evaluated bibliography. We therefore print first, in this review, a list of books each of which gives the reader for the field in question a well-annotated and clearly organized bibliography.[1]

A LIST OF TEXTBOOKS ON EDUCATION, EACH OF WHICH CONTAINS SELECTED BIBLIOGRAPHIC MATERIAL

I. School Administration

A. General Field

1. Cubberley, E. P. *Public School Administration.* Boston and Chicago: Houghton Mifflin Co., 1916.
2. Rugg, H. O. *Statistical Methods Applied to Education.* Boston and Chicago: Houghton Mifflin Co., 1917.
3. Strayer, G. D., and Thorndike, E. L. *Educational Administration; Quantitative Studies.* New York: Macmillan, 1913.

B. Special Phases of Administration

1. Minimal Essentials in Various Subjects. National Society for the Study of Education, *Fourteenth Yearbook*, Part I (1915), *Sixteenth Yearbook*, Part I (1917), *Seventeenth Yearbook* (in preparation, issued February, 1918). Bloomington, Ill.: Public School Publishing Co.
2. The Curriculum. Bobbitt, J. F., "Summary of the Scientific Studies on Curriculum Making," *Elementary School Journal*, October, 1917.
3. Junior High School. Douglass, A. A., Part III of the *Fifteenth Yearbook*, National Society for the Study of Education. Bloomington, Ill.: Public School Publishing Co., 1916.
4. School Surveys: City, State, Industrial, and Rural. Rugg, H. O., *Statistical Methods Applied to Education.* Boston and Chicago: Houghton Mifflin Co., 1917.
5. School Costs and Business Management. Rugg, H. O., "Summary of the Literature of Public-School Costs and Business Management," *Elementary School Journal*, XVII (April, 1917), 591.
6. Promotion Plans. Holmes, W. H., *School Organization and the Individual Child.* Worcester, Mass.: Davis Press, 1912.
7. Teachers' Marking Systems. Rugg, H. O., "Teachers' Marks and Marking Systems," *Educational Administration and Supervision*, February, 1915.
8. Educational Measurement and Standard Tests.
   (1) Gray, W. S., "Descriptive List of Standard Tests," *Elementary School Journal*, XVIII (September, 1917), 56.

[1] It should be pointed out that some of these bibliographies contain references to material of a non-quantitative nature. They are included in this review to bring all phases of educational literature within reach of the student of education.

Digitized by Google

(2) HOLMES, H. W., and others, *Descriptive Bibliography of Measurement in Elementary Subjects* (Harvard Bulletins in Education, No. 5). Cambridge, Mass.: Harvard University, 1917.

9. VOCATIONAL GUIDANCE. BREWER, J. M., and KELLY, R. W. *Selected Critical Bibliography of Vocational Guidance* (Harvard Bulletins in Education, No. 4). Cambridge, Mass.: Harvard University, February, 1917.

10. SECONDARY EDUCATION.
   (1) MONROE, PAUL (Editor), *Principles of Secondary Education*. New York: Macmillan, 1914.
   (2) SNEDDEN, D. S., *Problems of Secondary Education*. Boston, New York: Houghton Mifflin Co., 1917.

11. COMMUNITY CENTER ACTIVITIES. PERRY, C. A., *Community Center Activities*. New York: Russell Sage Foundation, 1916.

12. SUPERVISED STUDY. HALL-QUEST, A. L., *Supervised Study*. New York: Macmillan, 1916.

13. SCHOOL HYGIENE. RAPEER, L. W., *Educational Hygiene*. New York: Scribner, 1915.

II. TEACHING THE VARIOUS SUBJECTS

1. TEACHING ELEMENTARY SUBJECTS. RAPEER, L. W., *Teaching the Elementary-School Subjects*. New York: Scribner, 1917.

2. ENGLISH. HOSIC, J. F. (Compiler), *Reorganization of English in Secondary Schools* (Bulletin 2, 1917). Washington: U.S. Bureau of Education.

3. MATHEMATICS. SMITH, D. E., *Teaching of Mathematics*. Boston: Ginn & Co.

4. SCIENCE. TWISS, G. R., *Textbook in the Principles of Science Teaching*. New York: Macmillan, 1917.

5. HISTORY, CIVICS, AND GOVERNMENT.
   (1) JOHNSON, HENRY, *Teaching of History in Elementary and Secondary Schools*. New York: Macmillan, 1915.
   (2) WAYLAND, J. W., *How to Teach American History*. New York: Macmillan, 1914.
   (3) AMERICAN POLITICAL SCIENCE ASSOCIATION, COMMITTEE ON INSTRUCTION, *Teaching of Government*. New York: Macmillan, 1916.

III. EDUCATIONAL PSYCHOLOGY

1. GENERAL FIELD. Very complete summaries, critical comment, and bibliographies of general field in: THORNDIKE, E. L., *Educational Psychology* (3 vols.): Vol. I, *Original Nature of Men;* Vol. II, *Psychology of Learning* (covers field of practice curve and transfer of training); Vol. III, *Mental Work, Fatigue, and Individual Differences*. New York: Teachers College, Columbia University, 1913–14.

2. TRANSFER OF TRAINING. Complete tabular and descriptive summary of studies to 1914 in: RUGG, H. O., *Experimental Determination of Mental Discipline in School Studies*. Baltimore: Warwick & York, 1916.

3. MENTAL TESTS.
   (1) TERMAN, L. M., *The Measurement of Intelligence*. Boston, New York: Houghton Mifflin Co., 1916.
   (2) WHIPPLE, G. M., *Manual of Physical and Mental Tests* (2 vols.). Baltimore: Warwick & York, 1914.

Digitized by Google

B. SOURCES OF THE CURRENT QUANTITATIVE LITERATURE IN EDUCATION

Knowing the sources to which to turn for bibliographic material, the school man also needs to be in touch with the *permanently established agencies* which are constantly issuing quantitative literature. For those administrative officers and school teachers who have not already at hand a list of these sources, we enumerate the most important of them next. In each case bureaus or other types of educational agencies have been included if it seems likely that the school man by keeping in touch with them will be able to secure from time to time material of a sort helpful to his school practice. The idea underlying this next phase of our review is that there are certain more important bureaus, foundations, departments, etc., which are continually investigating scientifically specific aspects of school practice, and which are reporting the results to workers interested in the various problems. The list follows:

I. Bureaus and Foundations of National Scope

1. **U.S. Bureau of Education,** Washington, D.C. Four types of publications: (*a*) *Annual Report* of the Commissioner of Education comprises two volumes. Vol. I is made up of descriptive reports on current movements in education, recent educational experiments and innovations, descriptive summaries of conditions both in this country and abroad; Vol. II comprises detailed statistics for all cities and towns above 5,000 population which have reported to the Bureau during the past year. Statistics are for all phases of finance (revenues and expenditures, unit costs, etc.), attendance statistics, and statistics on the teaching staff. (*b*) *Bulletins* of the Bureau of Education. Each year the Bureau publishes approximately fifty bulletins written by collaborating specialists of the Bureau on particular problems of education. In the past some most important contributions to educational administration have been made through these bulletins. Lists can be found in the back cover of each bulletin. Under war conditions charges are made for each of these bulletins to those who are not on the selected mailing list. (*c*) *News Letters* of the Bureau of Education. Mimeographed material on particular aspects of education received intermittently by those on the mailing list.
2. **Russell Sage Foundation,** 130 E. 22d Street, New York City. Division of Education, Leonard P. Ayres, director. Has published since 1908 many valuable monographs and bulletins on special phases of educational administration. Send for bulletin announcing the activities and publications of the bureau. Publications sold at cost, in the main from 5 cents to 25 cents. A few larger monographs have been published.
3. **Carnegie Foundation for the Advancement of Teaching,** 576 Fifth Avenue, New York. 1916. (*a*) *Annual Reports* (eleventh annual report of the president and of the treasurer, October, 1916) containing many reports of detailed investigations on teachers' pensions for colleges and public schools; also summaries of studies made by the division of educational inquiry. (*b*) *Bulletins.* Ten separate bulletins, subjects of which can be found in recent annual reports. Studies of state and national conditions have been and are being made of medical education, law education, engineering education, state surveys of education in Vermont, and normal schools in Missouri. Reports on investigations of teacher-training courses.

Digitized by Google

4. **General Education Board**, 61 Broadway, New York, N.Y. (*a*) *Reports.* Four reports, the first for the years 1902–14, the second for 1914–15, the third for 1915–16, the fourth for 1916–17 (in preparation). (*b*) *Special studies in education.* Four special reports, three of which are in preparation. (*c*) *Occasional papers.* Seven short papers of a philosophic nature.

II. State Departments of Education Which Issue Monographic Material in Education

1. **New Hampshire** (Concord): Bureau of Research. Bulletins issued on educational measurement. One available by H. A. Brown on reading. Others in press on Latin, one on typewriting, and one on the languages.
2. **New Jersey** (Trenton): Address Commissioner C. N. Kendall. Monographs on the teaching of various subjects.
3. **Massachusetts** (Boston): Commissioner Payson Smith.
4. **New York** (Albany): Commissioner J. H. Finley, Deputy Commissioner. Thomas E. Finegan. Bulletins on various phases of school practice. Address Hiram C. Case for excellent material on school costs and school accounting. Accounting forms which would be helpful to superintendents of schools in small as well as in large cities published by C. F. Williams & Son, Albany, N.Y.
5. **Wisconsin** (Madison): Superintendent C. P. Cary; Dr. W. W. Theisen, director of educational measurements. Bulletins issued monthly, *Educational News Bulletin.*

III. Bulletins on Education Issued by State Universities

1. **Indiana** (Bloomington): Annual bulletin on educational measurement (50 cents). Bureau of Co-operative Research.
2. **Illinois** (Urbana): (1) Bulletins issued by School of Education (address director of school); (2) annual proceedings of University of Illinois High School Conference now contain good material. H. A. Hollister, high-school visitor.
3. **Kansas** (Lawrence): Dean F. H. Kelly.
4. **Texas** (Austin): University bulletins issued by Extension Division. Some administrative and pedagogical material. Mailing lists.
5. **Wisconsin** (Madison): Series of high-school manuals and other bulletins.

IV. Departments of Educational Research in City School Systems

City	Director	Address
Baltimore, Md.	Edwin Hebden	714 Euclid Ave., Roland Park Branch P.O., Baltimore, Md.
Boston, Mass.	Frank W. Ballou A. W. Kallom	14 Mason St., Boston, Mass.

Bulletins distributed by secretary of School Committee in response to request, 7 cents each. Twelve bulletins published covering the design and use of standard tests in arithmetic, spelling, geography, English, penmanship, reading; also reports on school administration.

Buffalo, N.Y.	William A. Mackey	Department of Public Instruction, 1401 N.Y. Telephone Bldg., Buffalo, N.Y.

Digitized by Google

City	Director	Address
Chicago	Samuel B. Allison	Office, Superintendent of Schools, Chicago, Ill.

Department just organized—no material available.

Cleveland, Ohio	C. W. Sutton	Office, Superintendent of Schools, Cleveland, Ohio

Planning to publish bulletins; conducts courses in educational measurements at city training school.

Columbus, Ohio	.....	Office, Superintendent of Schools, Columbus, Ohio
Detroit, Mich.	S. A. Courtis	82 Eliot St., Detroit, Mich.

Write S. A. Courtis for 1917–18 announcement of standard tests and bulletins handled by "Bureau of Co-operative Research."

Hibbing, Minn.	Wylie W. Richardson	Board of Education, Hibbing, Minn.
Kansas City, Mo.	George Melcher	Library Bldg., Kansas City, Mo.

Bulletins available on the use of standard tests in various subjects.

Los Angeles, Cal.	Robert H. Lane	Office, Superintendent of Schools, Los Angeles, Cal.

Division of research organized May, 1917. Will publish first yearbook June, 1918. Have issued two bulletins on standard tests.

Louisville, Ky.	Henrietta V. Race	Board of Education, Louisville, Ky.
New York, N.Y.	E. A. Nifenecker	500 Park Ave., New York, N.Y.

Fifteen bulletins published 1914–17. Prices vary from 10 cents to 20 cents. List of publications on application.

Oakland, Cal.	Virgil E. Dickson	Board of Education, Oakland, Cal.

Bulletins published intermittently; one on spelling and another on *Information Service as Developed in the Oakland Schools.*

Omaha, Neb.	Homer W. Anderson	Omaha, Neb.
Rochester, N.Y.	J. P. O'Hern	Office, Superintendent of Schools, Rochester, N.Y.
Schenectady, N.Y.	H. L. Davenport	108 Union St., Schenectady, N.Y.

Publications included in superintendent's annual report. No bulletins issued.

Topeka, Kan.	Ira J. Bright	620 Tyler St., Topeka, Kan.

Publication included in superintendent's annual report.

V. Bureaus of Research in Universities, Normal Schools, Boards of Education, Foundations, etc.

Institution	Director	Address
Arkansas, University of.	J. R. Jewell	Fayetteville, Ark.
Cleveland Foundation.	Allen T. Burns	Cleveland, Ohio
General Education Board.	Abraham Flexner	61 Broadway, New York, N.Y.

Digitized by Google

Institution	Director	Address
Indiana University.	Vacant at present	Bloomington, Ind.

Annual spring conference on educational measurements. Proceedings published as annual report in spring of each year. Three or four such reports available. Price 50 cents each. 1914 report out of print.

Iowa, University of.	E. J. Ashbaugh	Iowa City, Iowa

Annual conference on supervision held in December. No report published. Special bulletins published intermittently by Extension Division. Several already available on use of standard tests.

Kansas, University of.	F. J. Kelly	Lawrence, Kan.

Will publish bulletins intermittently. None is yet available.

Kansas State Normal School.	Walter S. Monroe	Emporia, Kan.

Publish annual reports in bulletin form and supplementary bulletins intermittently on educational measurements.

Minnesota, University of.	M. E. Haggerty	Minneapolis, Minn.
Nebraska, University of.	Charles Fordyce	Lincoln, Neb.
New York State Department of Education.	William A. Averill	Albany, N.Y.
Oklahoma, University of.	W. W. Phelan	Norman, Okla.

One report published. Plan to publish bulletins.

Russell Sage Foundation.	Leonard P. Ayres	New York, N.Y.
South Dakota, University of.	W. Franklin Jones	Vermilion, S.D.

No publications as yet.

South Dakota Northern Normal and Industrial School.	Willis E. Johnson	Aberdeen, S.D.

Bureau of Educational Research. Bulletin 11, No. 3 the only one available. Plan to publish others.

Wisconsin State Board of Education.	B. R. Buckingham	Madison, Wis.

VI. "Experimental Schools"

A list of 27 Experimental Schools and a complete list of references to such schools is given in Bulletin No. 3 of: The Bureau of Educational Experiments, 70 Fifth Ave., New York, N.Y. This bureau is made up of a group of experimenters in education, organized to support educational experimentation and to initiate new experiments; to collect and make available for public use information about the whole field of experiments in education, and to hasten introduction of newly acquired methods through actual teaching experiments. Five bulletins have been issued. Jean Lee Hunt, *secretary, Department of Information.*

VII. Important Monographic Series and Yearbooks Which Report the More Important Quantitative Studies in Education

1. *Columbia University, Teachers College, Contributions to Education.* Series includes 82 volumes to date. Ten volumes on an average are published each year. Complete catalogue sent on request. Bureau of Publications, Teachers College, New York City. Bulletin issued *Catalog of Publications of Teachers College,* Teachers College Bulletin, Eighth Series, No. 7, December 2, 1916. A series of 82 monographs containing reports of quantitative studies on elimination, retardation,

Digitized by Google

school finance, costs, and buildings; the teaching staff; marking systems; scales and standard tests, etc. Most of the early quantitative studies in administration were in this series.

2. *University of Chicago Supplementary Educational Monographs.* Edited in conjunction with *School Review* and *Elementary School Journal.* Published by The University of Chicago Press. Price varies; $5.00 per volume (postage 50 cents extra). First volume will contain approximately 1,000 pages. Published intermittently, probably six to ten monographs per year. Scientific studies on learning in the various subjects; the use of standard tests; also quantitative material on school administration.
3. *Educational Psychology Monographs.* Edited by Guy M. Whipple. Published separately at varying prices. Warwick & York, Lancaster, Pa. A list of more than thirty separate studies, chiefly in the field of educational psychology. Some material on mental tests and school administration.
4. *Harvard Bulletins in Education* (continuing Harvard-Newton bulletins). Harvard University Press, Cambridge, Mass. No. 5, September, 1917. No. 4 is first of new series devoted primarily to bibliographies on special fields and reports of scientific studies in the use of standard tests. Other administrative problems reported.
5. *Harvard Studies in Education.* Harvard University Press, Cambridge, Mass. Price varies with monograph. A few monographs already published, reporting investigations on the teaching staff and other problems in school administration.
6. *National Society for the Study of Education.* Yearbooks, sixteenth issued 1917. Public School Publishing Co., Bloomington, Ill. Over forty published. Price usually 75 cents and postage. List of titles, dates, and prices on paper-back cover of current copy. Sixteenth, Part I just issued. Ninety cents net. These yearbooks have in the past contained important studies on the certification of teachers, school supervision, industrial and agricultural education, school surveys, minimal essentials and measurement, rating of teachers, etc.
7. *School Efficiency Monographs.* World Book Co., Yonkers-on-Hudson, N.Y.; Chicago. Practical experiments and investigations in education published in this new series; e.g., Mahoney's *Standards in Education*, Reed's *Newsboy Service*, etc.

VIII. Educational Journals Which Report Quantitative Studies

1. *American School Board Journal.* Bruce Publishing Co., 354 Milwaukee St., Milwaukee, Wis. W. C. Bruce, editor. $2.00. Monthly. Vol. LV, No. 4, October, 1917 issue. Primarily a journal for superintendents and administrative officers; contains detailed material on school-board problems, school finance, school buildings; superintendency problems covered and many personal news notes on people active in the field; supervision of teachers, etc. No school board should be without it.
2. *Educational Administration and Supervision.* Warwick & York, Lancaster, Pa. (Managing editor: C. H. Johnson, deceased. $2.50. Monthly. Vol. III No. 7, September, 1917. Contains articles on administration, especially high-school administration, marking systems, grading and promotion, educational measurement, school inspection. Articles have been somewhat general. Only a small proportion contain quantitative material. Very little reference to school-board, school-finance, or school-building problems.

Digitized by Google

3. *Elementary School Journal.* The University of Chicago Press, Chicago, Ill. Edited by the Faculty of the School of Education, University of Chicago. C. H. Judd, chairman, Joint Editorial Committee. $1.50. Monthly, except July and August. Vol. XVIII, No. 2, October, 1917. Current fundamental movements in education are discussed each month. School administrators and teachers are kept in touch with all educational literature issued each month. Articles on teaching methods, important reorganizations of grades and subject-matter, standard tests and measurement, courses of study for the grades, articles of general administrative appeal as well as many of interest to elementary-school teachers.
4. *Journal of Educational Psychology.* Warwick & York, Baltimore, Md. J. C. Bell, managing editor, 1032A Sterling Place, Brooklyn, N.Y. $3.00 per year. Monthly, except July and August. Vol. VIII, No. 7, September, 1917. In the past has reported much quantitative material, but is devoted primarily to the field of laboratory and educational psychology. Articles appear at times on educational scales, standard tests, and other types of measurement of abilities or of school or teaching efficiency. Of more interest to the college teacher and student of educational psychology than to public-school people.
5. *School and Society.* Science Press. New York City, Substation 84. Lancaster, Pa., and Garrison, N.Y. J. McKeen Cattell, editor. $3.00 per year. Weekly. Vol. VI, No. 147, October 20, 1917. A general magazine appealing primarily to college and university teachers. Articles are very generally reprints of addresses of a philosophic nature. Each issue contains one article on educational research and measurement. Students of the quantitative materials of education should keep in touch with these research articles. News notes relate primarily to the college field.
6. *School Review.* The University of Chicago Press, Chicago, Ill. Edited by the Faculty of the School of Education, University of Chicago. C. H. Judd, chairman, Joint Editorial Committee. $1.50. Monthly, except July and August. Vol. XXV, No. 8, October, 1917. Essentially a high-school magazine. Contains articles of interest to the teacher of particular subjects. Much standardizing and measurement material; courses of study; discussions of reorganizations of secondary education (junior high-school discussions); methods of teaching specific subjects; discussions of educational news and comment on current events in the general field of education. Department of reviews attempts to acquaint the reader with all phases of educational literature appearing each month.

IX. Important Textbook Series in Education

1. *Riverside Textbooks in Education.* Houghton Mifflin Co., Boston. Edited by Ellwood P. Cubberley.

   One of most important series now published; contains books on school administration, psychology of common branches, mental, laboratory, and educational tests, statistical methods, school health work, and the teaching of the various subjects.
2. *Macmillan Textbook Series.* Macmillan, New York, N.Y. Edited by Paul Monroe.

   Primarily a series of books on the general principles, history, and philosophy of education; volumes on state and county school administration, on social education, on principles of teaching.

Digitized by Google

3. *Home and School Series.* Macmillan, New York, N.Y. Edited by Paul Monroe.
   A new series of six volumes; three volumes by H. S. Curtis on *Play;* others on general principles of education.
4. *School Efficiency Series.* World Book Co., Yonkers-on-Hudson, N.Y. Edited by Paul H. Harnus.
   A series of thirteen volumes comprising the reports of the New School Inquiry, covering in "survey" form the various fields of school practice; enlarged to include *Portland Survey* and other volumes.
5. *Educational Survey Series.* World Book Co., Yonkers-on-Hudson, N.Y.; Chicago.
   Publication of various school surveys in permanent form.
6. *Riverside Monograph Series.* Houghton Mifflin Co., Boston. Edited by H. Suzzalo.
   An important series of monographs written in non-technical language covering many aspects of education, especially the teaching of various subjects.

II. COMMENT ON CURRENT EDUCATIONAL WRITINGS

A. A CRITICAL REVIEW OF THREE NEW TEXTBOOKS ON HIGH-SCHOOL MATHEMATICS

In recent years the sociological emphasis in education has brought about three very distinct movements which effect the reorganization of the mathematics course of study. The first has revealed a distinct vocational demand for the modification of the subject-matter of mathematics and has shown three important aspects, the agricultural, the commercial, and the industrial. The second movement has revealed itself in an insistent demand for economy of time: first, economy of time in the minimal essentials of the subject-matter; and second, economy of time in teaching and learning. The third movement has called for the rearrangement of the subject-matter of mathematics in the intermediate grades, the results of the organization of the grades being called quite generally the junior high school.

In response to these demands three types of books have appeared in recent years, each claiming that it is an improvement on the old order of things because it responds to one of these demands. During the past five years several "agricultural mathematics" have appeared in which the essentials of arithmetic are applied specifically to the problems of the farm. In the same way a score of business arithmetics have appeared, applying that subject-matter to the commercial and trade activities. Finally, during the past six years a number of "shop" or "applied mathematics" books have appeared, each of which has attempted to apply arithmetic and the fundamentals of algebra and geometry to the specific situations which are met in particular industries and trades. This latter movement has assumed implicitly that boys leaving school in the ninth, tenth, and eleventh grades go into these trades. This, however, has not yet been established by quantitative investigation, and it is doubtful if it is true.

Digitized by Google

In all of this modification of the course of study there may be seen the gradual acquiescence of school teachers of mathematics in social pressure of a purely utilitarian sort. Three books[1] which have been issued within the past two months typify various aspects of these important movements of the modification of this traditional course of study in high-school mathematics.

The Keal and Phelps textbook is a distinct attempt of the school man to work out

> the sequence of mathematics that would enable the student to recognize fundamental principles and apply them in shop, drawing-room, and laboratory, and second, to so develop the course that each year's work would be a unit and not depend upon subsequent development for the application of that work.

It should be pointed out that books that have applied mathematics to the later occupational needs of children have not been founded upon detailed investigation of these later occupational needs. The Keal and Phelps textbook is the first to be constructed. The review editor gives it as his judgment that it is the best compromise text that has yet appeared in the field of secondary mathematics, which places in the hands of the teacher a systematic presentation of fundamental quantitative devices, the latter having been compiled with definite reference to occupational needs. The book is a most radical innovation from the standpoint of the currently used algebras. The teacher of any one of the most popular first-year algebras at the present time will perhaps be shocked at the lack of conformance to traditional order in the presentation of topics, and to the very slight emphasis upon many of the so-called fundamentals of first-year algebra (for example, factoring). Among the strong points of the book we can note great emphasis upon concrete material (for example, graphic illustrations, "scales"), use of levers for the exhibition of positive and negative numbers, a rather good use of the protractor for angle measurement, and a heavy emphasis on graphic illustration of fundamental processes. There is a good treatment of ratio and a very desirable emphasis upon the important topic of evaluation.

The book, however, is an interesting exhibit of the one-sided point of view that school men are now taking in their construction of textbooks. With the present emphasis upon fitting the course of study to social needs the teacher has been even less inclined than before to equip himself adequately with psychological technique and to organize the subject-matter of his books in terms of a careful analysis of the psychology of learning in the subject in question. The Keal and Phelps book is organized about certain situations which

[1] H. M. Keal and Nancy S. Phelps, *Secondary Mathematics*, I. New York and Chicago: Atkinson Mentzer, 1917. Pp. 224.

W. L. Vosburgh and F. W. Gentleman, *Junior High-School Mathematics, First Course*. New York: Macmillan, 1917. Pp. vii+146.

E. R. Breslich, *Third-Year Mathematics for Secondary Schools*. With logarithmic and trigonometric tables and mathematical formulas. Chicago: The University of Chicago Press, 1917. Pp. xviii+331+tables, 125 pages.

Digitized by Google

are so highly specialized that certain chapters are almost "non-teachable" to the average student. It is extremely difficult to defend the detailed content of chapter vi on "pulleys, gears, and speeds." In the remainder of the book there is not revealed such an unusual emphasis upon specialized situations, but it is clear that from the standpoint of the psychology of "learning" the book must be said to be *traditional*. By this we mean that in it there has been very little consideration of the step-by-step process by which children *learn* to handle intelligently the fundamental devices for quantitative thinking, namely, the equation, the formula, and the graph. We find on page 1, for example, that the pupil is taught to represent numbers by letters *without* adequate introductory material. Through the chapter there is revealed in the organization of the problems this same lack of recognition of the need of systematic psychological study of the learning process and careful grading of the subject-matter. The other chapters, in the main, do not make adequate use of "graphic representation," the graph being taken up systematically in the last chapter of the book. Chapter ii on evaluation illustrates again the lack of "psychologizing." The student is given two pages of definitions and is then at once plunged into the "evaluation" of very difficult problems. In forming a judgment of this book we feel, therefore, that, whereas it has probably the best selection of *fundamental quantitative materials in first-year mathematics, it has, like all other mathematics books which are being published at the present time, failed decidedly from the standpoint of "learning."*

In this connection Mr. Breslich's book, although a third-year book, not comparable in content with the Keal and Phelps book, is a distinct attempt to psychologize from the broader standpoint the organization of subject-matter in mathematics. His three-volume series is the most striking example which has appeared in years of the movement for the combining of essentials of geometry with the essentials of algebra. The extent to which the author has recognized problems of learning is seen in his attempt to merge, to unite, to fuse, these important groups of mathematical subject-matter called algebra and geometry. In this connection the editor's reaction to the author's attempt is that it is an interesting beginning in a most difficult and important field of educational study. It must be pointed out in this connection that the author is primarily interested in the preparation of students for the college and the university. This *Third-Year Mathematics* is designed primarily as a third unit, as a year's work, to follow the first two unit courses of work of the author in *First-Year Mathematics* and *Second-Year Mathematics*. It completes the study of high-school mathematics with algebra, trigonometry, and solid geometry. Without doubt these series of books represent the most important single example of the movement for unified mathematics in this country.

During the past year several books appeared which are designed to satisfy the demand for a unified course in mathematical instruction in the seventh, eighth, and ninth years. We already have heard of many successful attempts to combine the essentials of algebra and geometry in the seventh and eighth grades.

Digitized by Google

To do this successfully we need systematic textbook material. The Vosburgh and Gentleman *Junior High-School Mathematics* is a rather successful, traditionally organized mathematics book of this type. Their "unit course" in mathematics includes first a brief review of the arithmetic ordinarily covered by the first six grades. The equation is made use of early as a simple mathematical tool. In this connection the use of ratio is introduced and used in simple mathematical development. Measurement and decimals are introduced, and measurement of angles is taken up by the use of a protractor as a decimalized ruler. The interpretation of number data is made by means of graphs. Equations are applied to the formulas of mensuration, and percentage, discount, and interest, in addition to these other items, are included in the first-year course. These authors do recognize the need for more careful grading of problem-work.

The detailed scheme of this book as well as of the preceding two reveals, however, that *the fundamental psychological weakness in mathematics textbooks centers around the poor grading of problems*. Problems should be carefully graded in types of *gradually increasing* complexity and difficulty. It is easy to point out in these books as well as in the currently used traditional books *important gaps in the graduation of problem-work*. The other psychological weakness revealed by these books is that the subject-matter is organized in such a way as to be too remote from the pupil's experience. It is too abstract.

We may sum up, then, by commending the writers of these books upon the improvement of the content of the subject-matter of first-year mathematics, upon the elimination of much dead wood in the mathematical curriculum, and upon the tendency to adapt mathematics more closely to social needs. *It is clearly evident that important advances are being made.* On the other hand, *from the standpoint of the psychological criterion*, analysis of textbooks in high-school mathematics shows that *little or no advance has been made up to the present time.* It seems to us that the best attempt made in this field is that of Mr. Breslich, but that his chief contribution is in leading the way in the reorganization of the subject-matter found in algebra, geometry, or trigonometry.

B. A BOOK ON STATISTICAL METHODS APPLIED TO EDUCATION

One of the "Riverside Textbooks in Education" is Mr. Rugg's new book *Statistical Methods Applied to Education*.[1] The subtitle of the book, *A Textbook for Students of Education in the Quantitative Study of School Problems*, indicates the field which the book is expected to cover. Many school administrators who have long since forgotten much of their mathematics and who, in consequence, have been somewhat worried over the introduction of the statistical method of dealing with school problems will feel a sense of relief when they read in the author's preface that "it is possible to explain rather

[1] Houghton Mifflin Co., Boston and Chicago: 1917, $2.00.

Digitized by Google

completely the reasons for and the significance of the principal statistical devices without expressing the explanation in technical mathematical language." This book has been written with the deep-rooted conviction that this course is the proper one, and with a complete recognition of the limitations in mathematical equipment of the average school administrator and teacher. One must feel that the author has undertaken a very necessary and important kind of work when he attempts to show how statistical work in education may be studied and used without specializing in mathematics. As a result of this attempt Mr. Rugg has produced a book of some four hundred pages, but, on carefully studying each chapter, one does not find an unnecessary sentence in the entire book.

The book is a result of actual classroom work by the author with seven of his graduate classes in education. The men in these classes were all practical school men, including not a few superintendents, and the book therefore represents in part their reactions to the author's methods of presentation.

The book is divided into ten chapters. It seems to fall naturally into four great divisions: first, introductory, in which Mr. Rugg sets forth the uses which may be made of statistical methods in education, indicates the best way of quoting educational facts and some of the pitfalls which should be avoided, and shows how to tabulate with accuracy and dispatch the educational data which have been gathered.

Secondly, he deals with the method of computing averages. He discusses thoroughly and in a very clear manner the distinction between the statistics of variables and of attributes, how to throw the data into frequency distributions, and the plotting of the frequency curve. Under the heading of "averages" he discusses the mode, median, and arithmetic mean. These three methods of averages, the author feels, are all that the most of school men will ever need, but he includes also a discussion of the harmonic mean and the geometric mean. One of the most valuable parts of the chapter on averages, which is indicative of the desire of the author to be of real service to his reader, is the discussion of the use of the "different measures of central tendency." One not only wants to know how to do a certain thing, but also desires to know how to use it after he has done it.

Thirdly, the book deals with the measures of variability, the use of the normal frequency curve in education, and the measurement of relationship. Here are discussed the four measures of variability: the range, the quartile deviation, the standard deviation, and the mean deviation.

Chapter vii is a discussion of the frequency curve. It is one of the few chapters with which those who are not mathematically inclined will have any difficulty. The discussion of permutations and combinations might be criticized upon the ground that it is too technical, unless one considers that the text is intended for the use, not only of school administrators, but also of specialists in research work. For the use of the latter such a chapter is absolutely essential.

Digitized by Google

The discussion of the "measurement of relationship" in chapter ix, which includes methods in the computation of the correlation and regression coefficients and probable error, may also present difficulties to the average school man, but one cannot very well see how the discussion could be clarified, nor how it could be left out of a book on statistical methods.

The fourth great division is chapter x, and is in many respects the best presentation of the "use of tabular and graphic methods in reporting school facts" which has yet been published. One must feel that in this chapter the author has succeeded to a remarkable degree in answering that vexing question, How is one to *use* his knowledge of statistical methods? There are many graphic methods presented for reporting school facts which should prove to be invaluable to a progressive school administrator. Plate I, entitled "A Tabular Survey of the Published Quantitative Studies on School Administration," is a successful graphic device for putting the reader in immediate touch with the literature of the different phases of school administration. Five in all are studied, such as standardization of the course of study, the teaching staff, school machinery, and the pupil; school finance and business management; school organization and administration. The use of the plate is fully explained in the text.

The bibliography is remarkably well chosen and annotated and covers a wide range of studies on school administration. The appendix is divided into three parts: Appendix A is a selective bibliography of statistical methods, which is probably the most practicable which has yet been published; Appendix B is an explanation of the formulae and symbols used in the text; Appendix C includes ten tables for facilitating computation. The author has used 80 diagrams and 68 tables to illustrate the various processes which he describes. These diagrams and tables are well chosen.

It is very evident that the text will appeal to practical school administrators for use in determining many important school facts about their own systems, will aid in interpreting reports on other school systems, and will give meaning to their professional reading. In these days, when educational books and magazines fairly bristle with such terms as "frequency curve," "probable error," "median," "coefficient of correlation," etc., the school man who does not understand what these terms mean soon finds himself very much at sea.

This book should also prove invaluable to the heads of departments of research. These departments are being created very rapidly in our large school systems, and the heads of the departments will find that this book will be to them what a classical dictionary is to a teacher of Latin.

The third group which will use this book with profit is composed of students in our departments of education. Every up-to-date department of education is requiring some work in statistical methods, and as yet there has been no textbook which has fully met this need. The book is so planned and written that it will be useful, not only as a reference book, but also as a textbook. At the close of each chapter there are illustrative problems which may be worked

Digitized by Google

by the students. These are adapted from the author's *Illustrative Problems in Educational Statistics*, which has been published to accompany this text.

Mr. Rugg's book is a real contribution to the science of education, and one ventures to prophesy that it will be found on the desk of every progressive school man in the country.

PAUL C. STETSON, *Principal*

SOUTH HIGH SCHOOL
GRAND RAPIDS, MICHIGAN

III. BRIEF DESCRIPTIVE STATEMENTS OF NEW PUBLICATIONS

1. *Apprenticeship and Apprenticeship Education.* Colonial New England and New York. Seybolt. Cloth, 8vo, pp. 121. Teachers College Contributions to Education, No. 85, 1917.

Historical dissertation dealing with early trade education; describes rise of the apprenticeship system in England and its transplanting to the American colonies. Educational aspects of the practice of apprenticeship in New Plymouth and Massachusetts Bay colonies, Connecticut, New Haven, and Rhode Island colonies, and in New York province are indicated. Based upon legislation, court orders, indentures, wills, and other original sources; appendix contains a few transcripts of original documents; extensive bibliography of source material.

2. *Lancasterian System of Instruction in Schools of New York.* Reigart. Cloth, 8vo, pp. v+105. Teachers College Contributions to Education, No. 81, 1917.

An intensive study in the history of education, treating of part played by the monitorial plan in the development of New York City's public-school system from 1805 to 1853, describes origin and rise of Lancaster's plan and gives reason for introduction into New York, deals quite specifically with school organization and classification of pupils, and gives specimens of floor plans, curricula, and programs. Methods of teaching reading, arithmetic, science, manual training, and religious and moral education are indicated. School inspection, teacher-training, and the good and evil effects of the system are discussed. Good bibliography and analytical table of contents.

Digitized by Google

THE SCHOOL REVIEW

A JOURNAL OF SECONDARY EDUCATION

Edited by

THE FACULTY OF THE SCHOOL OF EDUCATION
THE UNIVERSITY OF CHICAGO

and published in conjunction with

THE ELEMENTARY SCHOOL JOURNAL AND
SUPPLEMENTARY EDUCATIONAL MONOGRAPHS

1-N
1917

Vol. XXV JANUARY 1917 No. 1

The High School of Tomorrow
David Snedden

Observation and Practice in Courses for Training Rural Teachers
C. J. Anderson and Winifred Edsall

The Arlington Plan of Grouping Pupils According to Ability in the Arlington High School
Frederick E. Clerk

THE UNIVERSITY OF CHICAGO PRESS
CHICAGO, ILLINOIS, U.S.A.

Agents
THE CAMBRIDGE UNIVERSITY PRESS, London and Edinburgh
KARL W. HIERSEMANN, Leipzig
THE MARUZEN-KABUSHIKI-KAISHA, Tokyo, Osaka, Kyoto, Fukuoka, Sendai
THE MISSION BOOK COMPANY, Shanghai

Digitized by Google

PUBLICATIONS EDITED BY THE FACULTY OF THE SCHOOL OF EDUCATION OF THE UNIVERSITY OF CHICAGO

JOINT EDITORIAL COMMITTEE
CHARLES HUBBARD JUDD, *Chairman*

Articles and Editorials of *The School Review*
ROLLO LAVERNE LYMAN
FRANKLIN WINSLOW JOHNSON

Reviews
HAROLD ORDWAY RUGG
ROLLA MILTON TRYON

Articles and Editorials of *The Elementary School Journal*
FRANK NUGENT FREEMAN
HARRY ORRIN GILLETT

Supplementary Educational Monographs
WILLIAM SCOTT GRAY

The School Review

ADVISORY BOARD

WILLIAM McANDREW, New York City
JEROME O. CROSS, Pasadena, California
I. M. ALLEN, Springfield, Illinois
H. C. MORRISON, Concord, New Hampshire
H. V. CHURCH, Cicero, Illinois
ALEXANDER INGLIS, Cambridge, Massachusetts
E. A. MILLER, Oberlin, Ohio
FRED C. AYER, Eugene, Oregon
H. L. MILLER, Madison, Wisconsin

Vol. XXV — No. 1

CONTENTS FOR JANUARY 1917

The High School of Tomorrow - - - - - - - - - - David Snedden 1

Observation and Practice in Courses for Training Rural Teachers C. J. Anderson and Winifred Edsall 16

The Arlington Plan of Grouping Pupils According to Ability in the Arlington High School, Arlington, Massachusetts - - - - - - - - - - Frederick E. Clerk 26

Educational News and Editorial Comment - - - - - - - - - - - - - - 48

The Chicago Dinner; Editorial Announcement; Vocational Education Association of the Middle West; The Religious Education Association Convention; The Passing of Latin as a Required Study; University Conferences for Teachers; The Danford Law in Ohio; The Educational Opportunity of Chicago; Correlation between Reading Tests and General Ability; Some Findings Regarding the Kansas Silent-Reading Test as a Measure of Ability; Directed Reading.

Book Reviews - 61

Carl A. Krause, The Direct Method in Modern Languages, *William F. Lusbke*.—Daniel Starch, Educational Measurements, *E. E. Lewis*.—J. Scott Clark, A Study of English and American Writers, *George Sherburn*.—Fred Carleton Ayer, The Psychology of Drawing, with Special Reference to Laboratory Teaching, *Earl R. Glenn*.—Walter Sargent and Elizabeth E. Miller, How Children Learn to Draw, *Frank N. Freeman*.—Julian Abernethy, English Literature.—Gilbert H. Trafton, Bird Friends: A Complete Bird Book for Americans, *Ethel Golden*.—James Cloyd Bowman, The Promise of American Life.—Frank N. Freeman, Experimental Education, Laboratory Manual, and Typical Results, *E. H. Cameron*.

Book Notes - 71

The School Review is published monthly from September to June by the University of Chicago at the University Press. ¶ The subscription price is $1.50 per year; the price of single copies is 20 cents. Orders for service of less than a half-year will be charged at single-copy rate. ¶ Postage is prepaid by the publishers on all orders from the United States, Mexico, Cuba, Porto Rico, Panama Canal Zone, Republic of Panama, Hawaiian Islands, Philippine Islands, Guam, Samoan Islands, Shanghai. ¶ Postage is charged extra as follows: For Canada 30 cents on annual subscriptions (total $1.80), on single copies, 3 cents (total 23 cents); for all other countries in the Postal Union, 52 cents on annual subscriptions (total $2.02), on single copies, 6 cents (total 26 cents). ¶ Patrons are requested to make all remittances payable to the University of Chicago Press in postal or express money orders or bank drafts.

Special Combination Rates: The School Review, the Elementary School Journal and Supplementary Educational Monographs for one full year at a special rate of $6.00 plus 50 cents postage on the Monographs. The School Review and Monographs are offered at $5.50 for one full year plus 50 cents for postage. In case of Canadian and foreign subscriptions the usual postage charges noted above should be added.

The following agents have been appointed and are authorized to quote the prices indicated:

For the British Empire: The Cambridge University Press, Fetter Lane, London, E.C., England. Yearly subscriptions, including postage, 8s. 6d. each; single copies, including postage, 1s. each.

For the Continent of Europe: Karl W. Hiersemann, Königstrasse 29, Leipzig, Germany. Yearly subscriptions, including postage, M. 10.10 each; single copies, including postage, M. 1.30 each.

For Japan and Korea: The Maruzen-Kabushiki-Kaisha, 11 to 16 Nihonbashi Tori Sanchome, Tokyo, Japan. Yearly subscriptions, including postage, Yen 4.00 each; single copies, including postage, Yen 0.50 each.

For China: The Mission Book Company, 18 Peking Road, Shanghai. Yearly subscriptions, $2.50; single copies, 20 cents, or their equivalents in Chinese money. Postage extra, if mailed direct outside of Shanghai, on yearly subscriptions 52 cents, on single copies 6 cents.

Claims for missing numbers should be made within the month following the regular month of publication. The publishers expect to supply missing numbers free only when they have been lost in transit.

Business correspondence should be addressed to The University of Chicago Press, Chicago, Ill.

Communications for the editors and manuscripts should be addressed to the Editors of THE SCHOOL REVIEW, The University of Chicago, Chicago, Illinois.

Entered as second-class matter, January 16, 1896, at the Post-office at Chicago, Illinois, under the Act of March 3, 1879.

Digitized by Google

NEW BOOKS

Whittem and Andrade's Spanish Commercial Correspondence

This book contains 100 letters in Spanish, all of which were actually taken from the files of Spanish and Spanish-American business houses. It also has questions in Spanish for oral drill on the letters, 50 outlines for letters to be written in Spanish, and a complete vocabulary. The text may be used as a reader, composition book, or manual of Spanish commercial correspondence. *Cloth. 330 pages. $1.25.*

Nelson's Spanish American Reader

The products, physical features, commerce, important cities, life, customs, heroes, literature, and ideals of Spanish America. In Spanish, with notes and vocabulary. *Cloth. viii+364 pages. $1.25.*

D. C. HEATH & CO., Boston, New York, Chicago

Next Month

A New Series of German Texts

Edited by PROFESSOR CAMILLO VON KLENZE
and DR. HENRIETTA BECKER VON KLENZE

Novel Features

I. Paraphrases and footnotes in simple German on the page with the text form the basis for German discussion to take the place of translation of text.

II. Vocabulary building by means of word groups, drills on idioms, and sentence construction.

III. Passages for free reproduction, presenting a systematic review of the main grammatical principles.

In Press

Hillern's Höher Als Die Kirche, by STEPHEN L. PITCHER, Soldan High School, St. Louis, Mo.

Von Wildenbruch's Das Edle Blut, by JOHN C. WEIGEL, University of Chicago.

German Scientific Reader, by FREDERICK W. SCHOLZ, of Columbia University.

THE MACMILLAN COMPANY

64–66 Fifth Avenue, New York City

Chicago Boston San Francisco Dallas Atlanta Seattle

Digitized by Google

THE RELATION OF LATIN TO PRACTICAL LIFE

A manual for making an Exhibit to show in concrete form the practical value of the study of Latin.

Price $1.55, postage 12 cents

Published by

FRANCES E. SABIN

419 Sterling Place **Madison, Wis.**

GRAPHIC LATIN

A graphic representation of the main principles of the entire Latin language descriptively outlined from the standpoint of its eight parts of speech and conveniently arranged on four charts for study and use in the classroom.

Chart I.	The Noun	Chart IV.	The Pronoun
Chart II.	The Adjective		The Preposition
	The Adverb		The Conjunction
Chart III.	The Verb		The Interjection

Complete set of four charts, bound in a ten-page pamphlet of heavy, durable, white paper (size 9×14 in.), per set - - - - $0.25

Single charts of heavy, durable, white paper (size 18×14 in.), each - - - - $0.10

Postage Prepaid

Address: JOHN C. GREEN, Jr., Blair Academy, Blairstown, N.J.

BETTER ENGLISH by J. MILNOR DOREY, A.M. (Harvard), English Department, High School, Trenton, N.J., and JUNIUS W. STEVENS, A.M. (Columbia), English Department, High School, Newark, N.J.

The direct, simple, and rational method of teaching English for which the Upper Grade, First-Year High-School, and Junior High-School Classes have been waiting. This book attracts rather than repels pupils; it leads them to master the subject rather than to flounder about and fail.

One experienced teacher says: "Girls and boys who use this book cannot fail to have their interests keenly stirred and their English greatly improved."

APPLIED LATIN by W. H. FREEMAN, PH.D. (Harvard), Latin Department, High School, Trenton, N.J.

The only First-Year Latin book on the market that makes Latin study live, interesting, and efficient; a book that will keep Latin in the curricula and demonstrate its real value in the mastery of English.

A prominent Latin Instructor has just said: "*Applied Latin* is the best First-Year Latin book on the market. It will revolutionise First-Year Latin teaching. How I wish I could have studied such a book when I was a boy."

Weidenhamer and Company, Publishers
Milton, Pennsylvania

RECENT BOOKS FOR TEACHERS

Problems of Secondary Education. By DAVID SNEDDEN.

This far-reaching discussion of the most important problems confronting the secondary school affords a constructive program adapting the high school to community needs. *Riverside Textbooks in Education.* $1.50.

English Composition as a Social Problem. By STERLING ANDRUS LEONARD.

This book shows how the teaching of composition becomes most effective only when the pupil is made to think of it as a means of conveying his ideas to other persons. *Riverside Educational Monographs.* 70 cents.

The Teacher as Artist. By HERMAN HARRELL HORNE.

A remarkably interesting and inspiring exposition of the aesthetic theory of teaching—a plea for the realization of the ideal of teaching as a fine art. *Riverside Educational Monographs.* 40 cents.

A Study of Fairy Tales. By LAURA F. KREADY. With an introduction by HENRY SUZZALLO.

An interesting and comprehensive discussion of the value of the fairy tale in the education of the child. The relation of this form of children's literature to other subjects is clearly shown. $1.40

Stories to Tell to the Littlest Ones. By SARA CONE BRYANT. Author of *How to Tell Stories to Children*, etc.

Stories, finger plays, and songs that the author has found most popular with young children. Illustrated. *School edition. In press.*

The above prices are postpaid

HOUGHTON MIFFLIN COMPANY

BOSTON **NEW YORK** **CHICAGO**

Digitized by Google

ALL LATEST IMPROVEMENTS

I want, through this advertisement, to establish as friendly business relations with you as I possibly can. I want you to realize also that it is my earnest effort and intention to give you full honest value for every dollar you spend with me. This is the only way I can succeed.

I am building up my business on the foundation of good value and square dealings. I am saving thousands of satisfied customers thousands of dollars, by supplying perfect—late style—visible writing—typewriters, at remarkably low prices.

All my transactions are handled throughout by personal correspondence. I assure you every courtesy and consideration in your dealings with me. Your order will have my prompt, careful, personal attention. I will be glad to do business with you.

Harry A. Smith

TYPEWRITER SENSATION

FREE TRIAL —— USE AS YOU PAY

Send me only $3.00 a month until the low total price of $49.15 is paid and the machine is yours

This is absolutely the most generous typewriter offer ever made. Do not rent a machine when you can pay $3.00 a month and own one. Think of it—Buying a $100.00 machine for $49.15. Cash price, $46.45. Never before has anything like this been attempted.

STANDARD VISIBLE UNDERWOOD

Perfect machines, standard size, keyboard of standard universal arrangement, writing the full 84 characters—universally used in teaching the touch system. The entire line of writing completely visible at all times, has the inbuilt tabulator, with billing devices, the two-color ribbon—with automatic reverse and key controlled shift, automatic flexible paper feed—automatic paper fingers, *the back spacer*—roller bearing carriage action—in fact, every late style feature and modern operating convenience. Comes to you with everything complete, tools, cover, operating book and instructions, ribbon, practice paper—nothing extra to buy. **You cannot imagine the perfection of this beautiful reconstructed typewriter until you have seen it.** I have sold several thousand of perfect latest style machines at my bargain price, and every one of these thousands of satisfied customers had the beautiful, strictly up-to-date machine on five days' free trial before deciding to buy it. I will send it to you F. O. B. Chicago for five days' free trial. It will sell itself, but if you are not satisfied that this is the greatest typewriter you ever saw, you can return it at my expense. You won't want to return it after you try it—**you cannot equal this wonderful value anywhere.**

You Take No Risk—Put In Your Order *Now*

When the typewriter arrives deposit with the express agent $7.15 and take the machine for five days' trial. If you are convinced that it is the best typewriter you ever saw keep it and send me $3.00 a month until my bargain price of $49.15 is paid. If you don't want it, return it to the express agent, receive your $7.15 and return the machine to me. I will pay the return express charges. **This machine is guaranteed just as if you paid $100.00 for it.** It is standard. Over one hundred thousand people own and use these typewriters and think them the best ever manufactured.

The supply at this price is very limited, the price will probably be raised when my next advertisement appears, so don't delay. Fill in the coupon today—mail to me—the typewriter will be shipped promptly. There is no red tape. I employ no solicitors—no collectors—no chattel mortgage. It is simply understood that I retain title to the machine until the full $49.15 is paid. **You cannot lose. It is the greatest typewriter opportunity you will ever have. Do not send me one cent. Get the coupon in the mails today—sure.**

HARRY A. SMITH 344-231 NORTH FIFTH AVENUE CHICAGO, ILLINOIS

H. A. SMITH

Room 344-231 N. Fifth Ave.

CHICAGO, ILL.

Ship me the Underwood F. O. B. Chicago, as described in this advertisement. I will pay you the $42.00 balance of the SPECIAL $49.15 purchase price, at the rate of $3.00 per month. The title to remain in you until fully paid for. It is understood that I have five days in which to examine and try the typewriter. If I choose not to keep it I will carefully repack it and return it to the express agent. It is understood that you give the standard guarantee for one year.

Name _____

Address _____

_____

Digitized by Google

I Made $50,000.00 Last Year in the Magazine Subscription Business

YOU can begin this business without capital—just as I began several years ago—and, no matter who you are or where you live, you will find it an interesting, agreeable, and improving occupation, in which you will be your own boss and will establish a business of your own, with almost no limit to your earning possibilities. I know hundreds of other magazine subscription men and women who make from $2,500 to $15,000 or more a year. You can start the business in your spare time and gradually build it up until it will pay to devote all your attention to it; therefore, you take no risk. There's no expensive outfit needed and no correspondence course to be taken. My monthly magazine and my handbook, in which I have written the results of eighteen years of experience, will give you full and complete information and instruction on every phase of the business.

Tear out, fill in, and mail this opportunity coupon today

George C. Crowley, Room 21, Crowley Building
3291 Third Avenue, New York City

Inclosed find One Dollar for one year's subscription to Crowley's Magazine and a copy of your handbook, *How to Make Money in the Magazine Subscription Business.*

Signed_____

Address_____

THE BEST NEW BOOKS

¶ In selecting books you will be greatly aided by the use of our December descriptive list of all kinds of books of all publishers.

Sent free on request. Write now for

THE MONTHLY BULLETIN of the Latest and Best Books

THE BAKER & TAYLOR CO.

Wholesale Dealers in the Books of all Publishers

354 Fourth Avenue **NEW YORK** **At Twenty-sixth Street**

Digitized by Google

Cambridge University Press

The Principles of Understanding. An introduction to Logic, from the Standpoint of Personal Idealism. By HENRY STURT, M.A. Crown 8vo. $1.25.

Studies Introductory to a Theory of Education. By E. T. CAMPAGNAC. Crown 8vo. 90 cents.

The Teaching of Geography. By B. C. WALLIS, B.Sc. (Econ.) London, F.C.P., F.R.G.S. With 12 illustrations. Crown 8vo. 90 cents. Cambridge Handbooks for Teachers.

Stories of Exploration and Discovery. By A. B. ARCHER, M.A. With 21 maps and illustrations. Crown 8vo. 65 cents.

The North West and North East Passages, 1576–1611. Edited by P. F. ALEXANDER, M.A. Selections from narratives and voyages. With 18 maps and illustrations. Large crown 8vo. 75 cents.

The Surface of the Earth. Elementary Physical and Economic Geography. By H. PICKLES, B.A., B.Sc. With 64 illustrations and 34 maps and diagrams. Crown 8vo. 50 cents.

A Short History of Classical Scholarship. From the Sixth Century B.C. to the Present Day. By Sir JOHN EDWIN SANDYS, Litt.D., F.B.A. With 26 illustrations. Crown 8vo. $2.25.

An Introduction to Greek Reading. By GEORGE ROBERTSON, M.A. Fcap 8vo. 65 cents.

An English-Greek Lexicon. By G. M. EDWARDS, M.A. Second edition, enlarged. Fcap 4to. $2.25.

La Maison aux Panonceaux, par LADY FRAZER (Mrs. J. G. Frazer). Avec des Exercices et un Lexique par A. WILSON-GREEN, M.A. Large crown 8vo. 45 cents. Cambridge Modern French Series.

En Douce France. Lectures Élémentaires Graduées avec Questionnaire par L. CHOUVILLE. Crown 8vo. With vocabulary, 50 cents; without vocabulary, 40 cents.

Domestic Science. By C. W. HALE, A.K.C. Part I. With 102 illustrations. Crown 8vo. 90 cents. Cambridge Technical Series.

Published by the Cambridge University Press, England

G. P. Putnam's Sons, Agents in the United States

2, 4, and 6 West 45th Street, New York City

Digitized by Google

TRUANCY AND NON-ATTENDANCE IN THE CHICAGO SCHOOLS

A Study of the Social Aspects of the Compulsory Education and Child Labor Legislation of Illinois

By

EDITH ABBOTT *and* SOPHONISBA P. BRECKINRIDGE

Members of the Faculty of the University of Chicago and of the Chicago School of Civics and Philanthropy

viii+472 pages, cloth; $2.00, postage extra (weight 1 lb. 10 oz.)

This study of truancy and non-attendance in Chicago, made by two persons who, for nearly a decade, have been closely connected with the social agencies of Chicago, is divided into two parts: Legal Principles: History of Compulsory Education Legislation in Illinois; and Present Conditions and Methods of Treatment. The first part is handled in five chapters occupying 88 pages and the latter in sixteen chapters covering 265 pages. There follows a list of appendixes of about a hundred pages furnishing valuable material and extracts in regard to historical matters relating to compulsory education and child labor laws.

From the Preface

"Thirty-three years have passed since the principle of compulsory school attendance was adopted in the state of Illinois by the passing of the first 'Act to secure to children the benefit of an elementary education.' The following chapters show how slow we were to adopt this principle and how reluctantly, after it was adopted, the local educational authorities of the various cities, towns, and counties to whom its enforcement was intrusted, proceeded to act under it. Experience has taught us that almost any form of social legislation that is left to be enforced by a multitude of independent local authorities will be brought slowly to its promised usefulness. . . . . Chapters xvii and xviii throw some light on the present compulsory-attendance situation throughout the state and raise once again the question whether a state educational authority—commission or bureau—should not be created with the power of supervising the work of the local authorities in the enforcement of the state school laws."

The University of Chicago Press
Chicago, Illinois

_____ 191__

GENTLEMEN: Please fill my order for_____copies of Abbott and Breckinridge: *Truancy and Non-Attendance in the Chicago Schools.*

Name _____

Address _____

_____

THE UNIVERSITY OF CHICAGO PRESS
CHICAGO - - - - - - ILLINOIS

Digitized by Google

ABOUT SOME NEW BOOKS

Cicero—A Sketch of His Life and Works

By *Hannis Taylor*

Author of "The Origin and Growth of the English Constitution," "The Origin and Growth of the American Constitution," etc.

Cicero was the embodiment of the Spirit of Roman Republicanism. In his life is epitomized the history of Roman public life at its best, and when, after having essayed the impossible task of saving the Republic through a social, moral, and political regeneration of the governing classes, he went down in the wreck of the commonwealth, the constitution lost its ablest advocate and defender. *Illustrated by reproductions of old and rare prints.* 8vo. $3.50.

Philippine Folk Tales

By *Mabel Cook Cole*

With her husband, who was engaged in scientific work, Mrs. Cole spent four years among the wild tribes of the Philippines. These folk tales are written just as she heard them related in the homes of the people, around the campfires, and as chanted by the pagan priests during their religious ceremonies. From these tales much can be learned of the magic, superstitions, and weird customs of the Filipinos, and one can also feel something of the charm of their wonder world as it is pictured by these dark-skinned inhabitants of our Island Possessions. Illustrated. 12mo. $1.25.

Our Field and Forest Trees

By *Maud Going*

Author of "With the Wild Flowers," and "Field, Forest and Wayside Flowers."

It is the story of the trees that Miss Going tells from the time that Nature plants the seed until the tree's maturity. Unlike most nature books which begin in the spring, this opens with the sowing of the seed in the autumn when the life of the tree really commences. The reader is then taken through all the stages of tree life and is told how the tree grows, how it lives, and what the leaves are for, etc., etc., together with a lot of wonderfully interesting tree and forest lore. Illustrated. 12mo. $1.50.

The Principles of Natural Taxation

By *C. B. Fillebrown*

Author of "Taxation," "The A. B. C. of Taxation"

To clearly and plainly set forth the genesis and progress of the plans formulated by a certain school of economists for the taxation of economic rent is the aim of this work. These plans are otherwise known as the single-tax doctrine, popularly ascribed to and championed by Henry George. The doctrine, however, is almost as old as the science of political economy itself, Adam Smith being the first, perhaps, to expound it. Portraits. 12mo. $1.50.

The Mother and Her Child

By *William S. Sadler, M.D.*, and *Lena K. Sadler, M.D.*

The things that every mother should know are here set forth by two eminent physicians in the pages of this practical and helpful volume. It consists of three parts or divisions of its subject, part 1 dealing with the mother until the birth of the child; part 2, with the infant until the weaning period, and part 3 with the problems connected with the care and bringing up of the child until adolescence. Illustrated. 12mo. $1.50.

Property and Society

By *A. A. Bruce*

An examination and study of the private property from the social viewpoint, showing the value to society of this right, and evincing the extent to which it has and should be recognised. Like all other individual rights, however, it must, the author contends, always be subject to the public welfare, this being the highest law of our social system. 16mo. 50 *cents.*

Women Workers and Society

By *Annie M. MacLean*

More than eight million women go out from home daily in the United States to various tasks in the industrial and professional world. The close relationship of this great host, the mothers of the next generation, to our social well-being is obvious, and it is of vital interest to society that these young women have a fair chance in the world; that they be well-fed, well-housed, and be given the opportunity to develop physically and intellectually. The problems of this eight million are the problems of the hundred million of this country, and it is with the hope that it may help to awaken an interest in that important class that this study of the woman worker has been written. 16mo. 50 *cents*

Our Fellow Shakespeare

By *Horace J. Bridges*

At once an interpretation of and a guide to the works of the world's greatest author. Mr. Bridges, the well-known writer and lecturer, depicts Shakespeare as the popular author of his time, who wrote his marvelous plays for the people and the people only. 12mo. $1.50

A. C. McCLURG & CO., Publishers, Chicago

Digitized by Google

PROFESSIONAL COMRADESHIP FOR THE TEACHER OF ENGLISH

The stimulus of personal touch with others engaged in like tasks is needed by all workers. This is provided for the teachers of English in the United States by *The English Journal*, edited by James Fleming Hosic.

This embodies the following features:

1. Leading articles discussing in an authoritative way every aspect of English teaching and the equipment for it.
2. Round Table contributions in a delightfully informal and direct manner.
3. Editorials setting forth important current educational issues.
4. News of the National Council of Teachers of English, of fifty local societies, of current articles and pamphlets valuable to English teachers; and
5. Reviews and notices of new books.

All leaders in education and writers on educational subjects refer to *The English Journal* as the authority in its field. It is indispensable to English teachers, for it is the best means of keeping them abreast of the times and in touch with their colleagues.

Published monthly, except July and August, at $2.50 a year, 30 cents a copy.

Address

THE ENGLISH JOURNAL

68th Street and Stewart Avenue **Chicago, Illinois**

A Manual for Writers

By JOHN M. MANLY
Head of the Department of English of the University of Chicago

and JOHN A. POWELL

A book designed to aid authors and all others who are concerned with the writing of English. It aims to answer the practical questions that constantly arise in the preparation of manuscripts for publication, business letters, and any sort of composition where correctness of form is an important element.

It treats in a clear and convenient way the matters of grammar, spelling, and general form about which writers need to be informed, and gives full directions on the preparation of "copy" for the printer and the correcting of proof. The chapter on letter-writing is unique and gives just the help that is constantly wanted and that is not found in other manuals.

viii+226 pages, 12mo, cloth; $1.25 net, postage extra (weight 1 lb. 8 oz.)

The University of Chicago Press
Chicago, Illinois

CHAPTERS IN RURAL PROGRESS

BY KENYON L. BUTTERFIELD
President of the Massachusetts Agricultural College

The increasing interest in rural matters, which began with the generally growing love of outdoor life and which has already included the technical aspects of modern agriculture, is gradually being broadened to embrace the field of economic and social investigations. At present the literature regarding the sociological phases of rural life is particularly meager.

President Butterfield emphasizes in his book the importance of the social aspects of the rural community and describes some of the newer movements resulting in the expansion of rural life. There are chapters on the work of the various agencies for rural development, such as the agricultural colleges, the farmers' institutes, rural schools, the Grange, the country church, etc.

x+252 pp., 8vo, cloth; $1.00, postage extra (weight 1 lb. 7 oz.)

THE UNIVERSITY OF CHICAGO PRESS
CHICAGO, ILLINOIS

Digitized by Google

Two Interesting Textbooks

Barber's First Course in General Science

By FREDERIC D. BARBER, Professor of Physics in the Illinois State Normal University; MERTON L. FULLER, Lecturer on Meteorology in the Bradley Polytechnic Institute; JOHN L. PRICER, Professor of Biology in the Illinois State Normal University; and HOWARD W. ADAMS, Professor of Chemistry in the same. vii+588 pages of text. 12mo. $1.25.

This manual for the first year of the high school is based on the conviction that at this stage the work in science should emphasize the physical aspects of animal and plant life, with personal and community welfare the crucial point of attack.

W. H. BENDER, *University of Minnesota*:—As I am very much interested in the correlation of agriculture work in our public schools with the other science work, such a book as this has a double meaning and interest to me. I have found many excellent things in it. It certainly is packed full of interesting and helpful discussions of the things that lie close at hand with the first-year high-school pupil.

G. M. WILSON, *Iowa State College*:—I have not been particularly favorable to the general science idea, but I am satisfied now that this was due to the kind of texts that came to my attention and the way it happened to be handled in places where I had knowledge of its teaching. I am satisfied that Professor Barber, in this volume, has the work started on the right idea. It is meant to be useful, practical material, closely connected with explanation of everyday affairs. It seems to me an unusual contribution along this line. It will mean, of course, that others will follow and that we may hope to have general science work put on such a practical basis that it will win a permanent place in the schools.

Finney and Brown's Modern Business Arithmetic

By H. A. FINNEY, of the Walton School of Commerce, Chicago, and J. C. BROWN, Principal of the State Normal School, St. Cloud, Minn. *Brief Course.* 298 pp. 8vo. 85 cents. *Complete Course.* 488 pp. 8vo. $1.10.

In addition to an abundance of arithmetical drill, the book attempts to give some knowledge of the business activities that give rise to the problems. As far as practicable, applications are arranged in a business sequence instead of an arithmetical sequence. The arithmetic of bookkeeping receives special attention. The presentation of statistics in both graphical and tabular form is emphasized.

A. R. WILLIAMS, *Illinois State Normal University* in SCHOOL AND HOME EDUCATION:—Here is a handbook that should be a splendid basis for a semester's work. There is a fair proportion of preliminary drills—the authors are cognizant of the fact that the high-school arithmetic class needs this—and it is pleasing to note the simplicity of arrangement and the fine treatment of short methods. From the start, the keynote of the work is struck by the introduction of ruled forms. Together with a new ideal of topic selection, the insistence upon ruled forms is a dominant mark of the book's originality and adaptability to modern business.

Modern Business Arithmetic is a *different book*. It is a step forward; it owes very little to prototypes; it reflects satisfactorily the trend of arithmetic in business. It is not competitive in the sense that it was written to rival other books in its line. Except in so far as it deals with abstract mathematics it bears very little resemblance to other textbooks on the subject.

HENRY HOLT AND COMPANY

34 W. 33d STREET, NEW YORK
6 PARK STREET, BOSTON
623 S. WABASH AVE., CHICAGO

Digitized by Google

England's World Empire

Some Reflections on Its Policy and Growth

By ALFRED HOYT GRANGER

A condensed history of England from the time of Queen Elizabeth to the present day, with special reference to the principles involved in the present war.

"Napoleon, just before his death, wrote a last letter to his little son, the burden of which was 'read history' and again 'read history, for it is the only foundation of a true understanding and true philosophy.' History will show that this great war springs from the deep-rooted fear that the unconquerable Slav will overrun and dominate western Europe. That this fear is largely psychological and without foundation, is my deep belief, and one of the duties facing the United States is, by her influence, her power, and by clinging to her early ideals, to remove this bugbear of fear from the world and so point out the paths of an abiding peace."—AUTHOR.

Mr. Granger represents that small but intensely American group of citizens who have been able to keep their heads while watching the steps of the belligerent nations in their efforts to create factions in the United States. In his vigorous sketch of England's development from the days of Queen Elizabeth to the present time, Mr. Granger combines the clear vision of the true historian with the loftiest national sentiment, and while he points out England's policy of world-empire as a strong and successful yet unscrupulous one, he does not fail to give a fine tribute to the English people as a nation.

Pages 300. Cloth, $1.50

THE OPEN COURT PUBLISHING COMPANY
112 S. MICHIGAN AVE. CHICAGO

Digitized by Google

THE PSYCHOLOGY OF RELIGION

By GEORGE ALBERT COE

Professor of Religious Education, Union Theological Seminary

For the Minister's Library
For the Theological Seminary Student
For College and Seminary Classes
For the Psychologist and Educator
For Young People's and Adult Bible Classes

Of nineteen chapters, the first four are devoted to aspects of psychological study and investigation. The remaining fifteen present the author's keen analysis of religion in its individual and social processes.

xviii+366 pp., 12mo, cloth; $1.50, postage extra (weight 1 lb. 10 oz.)

The University of Chicago Press
Chicago - - - Illinois

Digitized by Google

For next semester

Mayne & Hatch's *High School Agriculture* - - - - $1.00

Garner's *Government in the United States* - - - - - 1.00

Rivenburg's *Review of Algebra* - .36

Coulter's *Plant Life and Plant Uses* 1.20

Cowles & Coulter's *A Spring Flora for High Schools* - - - .60

Coulter's *Botanical Notebook and Laboratory Manual* - - - .36

Laughlin's *Elements of Political Economy*. 1915 Edition - - 1.20

Catalogues and descriptive circulars sent on request

New York
Cincinnati
Chicago
Boston
Atlanta

AMERICAN BOOK COMPANY
330 East Twenty-second Street
CHICAGO, ILLINOIS

Digitized by Google

SUPPLEMENTARY EDUCATIONAL MONOGRAPHS

Edited in conjunction with *The School Review* and *The Elementary School Journal*

Published by THE UNIVERSITY OF CHICAGO PRESS

Monograph No. 1. (In press)

Studies of Elementary-School Reading through Standardized Tests. By WILLIAM SCOTT GRAY, PH.D., Instructor in Education and Dean of the College of Education, University of Chicago.

In this monograph, which will be about 160 pages in length, Dr. Gray has given an exhaustive account of the methods of preparing and carrying on reading tests. He also reports in full the results of studies in 23 Illinois schools, in Cleveland, Ohio, where he was a member of the Survey Staff, and in 13 other cities in the central states. The tests here fully discussed were also used by Dr. Gray in the surveys of Grand Rapids and St. Louis. They are at present being employed in a large number of centers where a complete body of comparative material will be useful for the purpose of interpreting results. The monograph will report the tests so that anyone can use them.

Monograph No. 2. (In press)

An Experimental Study in the Psychology of Reading. By WILLIAM A. SCHMIDT, PH.D., Professor of Education, University of Oklahoma.

This monograph, which will be about 150 pages in length, reports an extended investigation into the eye movements exhibited by a number of readers. The method of recording these eye movements is the photographic method. Plates show typical results. The study continues the work of Dodge, Dearborn, Huey, and others, and contributes to the scientific foundation for methods of teaching reading.

Subscription rates have been arranged for all of the publications. If the journals are taken separately, the price of subscription is $1.50 each. If the monographs are taken by the volume, each volume to be completed in one year and to contain approximately one thousand pages, the subscription price will be $5.00 with an additional cost of 50 cents for postage. A combination of all three publications is offered for $6.00 plus 50 cents for postage on the monographs.

Digitized by Google

SEE THIS LIST GROW

Textbooks in Correlated Mathematics

based on thirteen years' classroom experience have proved successful throughout the United States

FIRST-YEAR MATHEMATICS FOR SECONDARY SCHOOLS

Fourth revised edition, xxiv+344 pages; $1.00, postage extra (weight 1 lb. 12 oz.)

SECOND-YEAR MATHEMATICS FOR SECONDARY SCHOOLS

Second revised edition, xviii+340 pages; $1.00, postage extra (weight 1 lb. 10 oz.)

***By* ERNST R. BRESLICH**

Head of the Department of Mathematics in the University of Chicago High School

Some of the schools using one or both of the books are:

Alabama
- Mechanic Arts Night School, Birmingham
- Perry County High School, Marion

Arizona
- Florence High School

Arkansas
- Fort Smith High School

California
- State Normal School, Los Angeles
- Montezuma Mountain Ranch School, Los Gatos
- *Oakland*
  - Technical High School
  - Vocational High School
- Polytechnic High School, Riverside
- Santa Cruz High School

Colorado
- State Teachers College, Greeley
- Yuma High School

Connecticut
- Greenwich Academy, Greenwich
- Loomis Institute, Windsor

District of Columbia
- Miss Madeira's School

Florida
- Central Normal College, Dade City

Georgia
- Athens High School
- The Berry School, Mount Berry

Idaho
- Downey High School
- Grangeville High School
- Lewiston High School
- Rathdrum High School

Illinois
- *Carbondale*
  - Attucks School
  - Carbondale High School
  - Lincoln School
  - Southern Illinois State Normal University
- Centralia High School
- *Chicago*
  - Pullman Free School
  - University of Chicago High School
- J. Sterling Morton High School, Cicero
- Elizabeth High School
- Goreville High School
- Jerseyville High School
- Township High School, Marissa
- State Normal University, Normal
- Troy High School

Indiana
- Culver Military Academy
- Indiana State Normal School, Terre Haute

Iowa
- State Teachers College, Cedar Falls
- Cherokee High School
- Mason City High School
- Rock Valley High School
- Vinton High School

Kansas
- Junior High School, Chanute
- Emporia High School
- Horton High School
- Central High School, Kansas City
- University of Kansas High School, Lawrence
- Leavenworth High School
- State Normal School, Pittsburg
- Wichita High School

Kentucky
- Cross School, Louisville

Louisiana
- Bogalusa High School

Maine
- Bath High School

Massachusetts
- Abbott Academy, Andover
- Drury High School, North Adams
- Oak Bluffs High School
- Bethel Bible Institute, Spencer

Michigan
- Gaylord High School
- Central High School, Grand Rapids

Minnesota
- Baudette High School
- Grand Rapids High School
- Mankato High School
- University of Minnesota High School, Minneapolis
- St. Peter High School

Mississippi
- Mississippi Normal College, Hattiesburg

Missouri
- The Principia, St Louis
- State Normal School, Springfield

Montana
- Harlem High School

Nebraska
- Hickman High School
- Kearney Military Academy
- Brownell Hall, Omaha

Nevada
- Lyon County High School, Yerington

New Hampshire
- Alton High School
- Amherst High School
- Berlin High School
- Charlestown High School
- Concord High School
- Hopkinton High School, Contoocook
- Dover High School
- Enfield High School, Marshfield
- Exeter High School

Digitized by Google

New Hampshire (*Continued*)
Hancock High School
Lebanon High School
Colby Academy, New London
Tilton High School
Simonds Free High School, Warner
Whitefield High School
Woodsville High School

New Jersey
Friends High School, Moorestown
Kent Place School, Summit

New Mexico
Capitan High School

New York
Packer Collegiate Institute, Brooklyn
Wadleigh High School, New York
The Ossining School, Ossining-on-Hudson

North Carolina
Chapel Hill High School
Lees-McRae Institute, Plumtree

North Dakota
Larimore High School

Ohio
Batavia High School
Baldwin-Wallace Academy, Berea
Columbus
High School of Commerce
East High School
North High School
South High School
West High School
Clinton Avenue High School
Milo High School
Columbus Trade School
Township High School, Enon
Georgetown High School

Oklahoma
Marlow High School

Pennsylvania
Lower Merion High School, Ardmore
Thorne Model School of Bryn Mawr College, Bryn Mawr
Conway Hall, Carlisle
Abington Township High School, Glenside
Franklin Institute, Philadelphia

Rhode Island
Miss Wheeler's School, Providence

South Carolina
Training Dept. of Winthrop College, Rock Hill

Tennessee
Chattanooga High School

Texas
Junior High School, Austin
West Texas State Normal School, Canyon
Coupland High School
Manor High School
Nocona High School

Utah
Box Elder High School, Brigham City
Millard County High School, Fillmore
South Summit High School, Kamas
Brigham Young College, Logan

Utah (*Continued*)
South Sanpete School District, Manti
Murray High School
Brigham Young University, Provo
Sevier High School, Richfield
Latter-Day Saints High School, Salt Lake City

Vermont
Bennington High School
Burr & Benton Seminary, Manchester
Wallingford High School

Virginia
State Normal School, East Radford

Washington
Granger High School
Moran School, Rolling Bay

West Virginia
Huntington High School
Wellsburg High School

Wisconsin
Township High School, Arena
Stoughton High School
Waterloo High School

Wyoming
University of Wyoming High School, Laramie

? A PERSONAL QUESTION ?

A great many schools are trying out the first-year book with some of their students this year. *Can you arrange to make a test with a class or two of students the second semester?* We shall be glad to have you write us if you think you can do this, or are interested in the book. The following form is for your convenience.

ORDER FORM

The University of Chicago Press, Chicago, Illinois: _____ 191__

GENTLEMEN: Please send me (*with bill* or *for examination to be retained free if used in class*) the following books as indicated.

With Bill	For Exam.	
☐	☐	*First-Year Mathematics for Secondary Schools* by BRESLICH
☐	☐	*Second-Year Mathematics for Secondary Schools* by BRESLICH
☐	☐	*A Review of High-School Mathematics* by REEVE and SCHORLING 80 pages; 40 cents, postage extra (weight 10 oz.)
☐	☐	*Geometric Exercises for Algebraic Solution* by MYERS 82 pages; 75 cents, postage extra (weight 12 oz.)

Name _____

Teaching Position _____

Address _____

THE UNIVERSITY OF CHICAGO PRESS
CHICAGO - - - - - - ILLINOIS

Digitized by Google

A Review of High-School Mathematics

By **WILLIAM D. REEVE**

Head of the Department of Mathematics in the University of Minnesota High School

and **RALEIGH SCHORLING**

Instructor in Mathematics in the University of Chicago High School

This book contains material for a review of the work of the first three high-school years. It is valuable in fourth-year review classes as a means of gathering up the loose ends, and of giving the pupil a clearer conception of the mathematical work covered. In these classes also it is a means of reviewing quickly and definitely the material that is necessary to enable the high-school pupil to prepare for college-entrance examinations. In semester reviews in the first, second, or third year, and for teachers and prospective teachers who are preparing for city and state examinations, the book is especially useful. It is adapted for use with any standard text to be used one or two days a week throughout the course.

SOME OPINIONS

"I shall recommend it to our teachers of mathematics review."—J. Remson Bishop, Principal, Eastern High School, Detroit, Michigan.

"I used *A Review of High-School Mathematics* as a review for my classes this term and found it most helpful. For a general grasp of the work in high-school mathematics, I have never seen its equal."—Hanson H. Anderson, Manual Training High School, Indianapolis, Indiana.

"I have been more than delighted with the results obtained from the Reeve and Schorling review book."—W. Ray Smith, J. Sterling Morton High School, Cicero, Illinois.

"Well worked out and meets a real need in high-school mathematics."—E. C. Unverferth, Tulsa High School, Tulsa, Oklahoma.

x+70 pages, 12mo, cloth; $0.40, postage extra (weight 10 oz.)

Geometric Exercises for Algebraic Solution

By **G. W. MYERS**

Professor of the Teaching of Mathematics and Astronomy
The College of Education

and Instructor in Mathematics in the University High School
The University of Chicago

The manual contains about 1,000 problems and exercises, classified under the appropriate geometrical caption, and so stated and exemplified as to suggest an algebraic formulation and treatment. The problems cover the field of elementary algebra to and through quadratics. The thinking involved in setting up the equations is mainly geometrical; that involved in the solutions is mainly algebraic. In schools that continue to teach algebra and geometry separately, this book will serve to economize time and effort by helping to hold, through the second-year geometry, the ground made in algebra during the first year. It will also be found an efficient handbook of supplementary work for second-year algebra in schools whose programs call for geometry in the first and algebra in the second year.

x+72 pages, 12mo, cloth; 75 cents, postage extra (weight 12 oz.)

THE UNIVERSITY OF CHICAGO PRESS

CHICAGO - - - - - - ILLINOIS

Digitized by Google

TEACHING HIGH-SCHOOL LATIN

By JOSIAH B. GAME

Professor of Ancient Languages, Florida State College for Women

A practical working manual for Latin teachers, prepared by a teacher of long experience in the high school, in the normal school, and in the college.

The first part of this book marks out definitely the function of Latin in the education of young people, and defines with exactness the work which the teachers of Latin in the high school must do. The ways and means by which these ends may be reached occupy the main body of the book. The latter part of this work is devoted to suggestions intended to add to the interest of the department. It is the only book of its kind—an actual working manual fitted to the needs of the high-school teacher.

$1.00, postage extra (weight 12 oz.)

The University of Chicago Press
Chicago - - - - - Illinois

Do You Want to Know

What Your Handwriting Reveals?

WE have published a fascinating booklet of 32 pages on the subject of graphology, by William Leslie French. Every reader of this publication will be interested in comparing the examples of handwriting in judging character and disposition of the writer.

A copy of this booklet and 12 different patterns of **The Spencerian Steel Pens** will be sent postpaid on receipt of **ten cents.**

If you can do good work with a poor pen you can do better work with a good pen.

Silver plated Falcon pens, smooth points, wear long, will not corrode.

SPENCERIAN PEN CO.
349 Broadway - - - New York City

WHERE DUPLICATE COPIES ARE NEEDED

Daus Improved Tip Top Duplicator

is an ideal assistant, always ready to reproduce clean, clear, perfect copies of letters, manuscripts, price lists, bills, invoices, reports, drawings, menus, etc., etc. Don't take our word, try it yourself for

Ten days' trial without deposit

If not satisfactory, return and no questions asked. Makes 150 handwritten and 50 typewritten copies in a few minutes. Negatives require no washing out after using, and negative rolls can be used from 15 to 20 times. Complete outfit contains a continuous roll of Daus Non-Peeling Anti-Stick Negative Roll. Cap size 8¾ x 13 inches. Price $7.50.

$7.50

FELIX K. DAUS DUPLICATOR CO.
Daus Building, 111 John Street, NEW YORK

TEACHERS OF BIOLOGY AND GEOLOGY

Will find the Bulletins of the Geographic Society of Chicago of special value for field trips, lectures, etc.

Write for descriptive circulars.

The University of Chicago Press
Chicago - - - - - Illinois

SCHOOL PLAY COSTUMES

Supplied complete and correct

FRITZ SCHOULTZ & CO.
19 West Lake Street Chicago, Illinois

Let us hear from you

The Origin of the Earth
By Thomas C. Chamberlin

A new chapter in "the Story of the Birth of the Earth." xii+212 pages, 8vo, cloth; $1.50 net, postage extra (weight 1 lb. 6 oz.).

One of "The University of Chicago Science Series"

The University of Chicago Press
CHICAGO - - - - - - ILLINOIS

Digitized by Google

FINE INKS AND ADHESIVES
For those who KNOW

Higgins'

- Drawing Inks
- Eternal Writing Ink
- Engrossing Ink
- Taurine Mucilage
- Photo Mounter Paste
- Drawing Board Paste
- Liquid Paste
- Office Paste
- Vegetable Glue, Etc.

Are the Finest and Best Inks and Adhesives

Emancipate yourself from the use of corrosive and ill-smelling inks and adhesives and adopt the **Higgins' Inks and Adhesives.** They will be a revelation to you, they are so sweet, clean, well put up, and withal so efficient.

At Dealers Generally

CHAS. M. HIGGINS & CO., Mfrs.
Branches: Chicago, London
271 Ninth Street Brooklyn, N.Y.

Just the Typewriter for You
SOLD ON JUST THE TERMS THAT SUIT YOU

The Remington Junior

The Junior is *smaller* and *lighter* than the Standard Remington models—weighs only 17 pounds.

It is *simpler*. You can quickly learn to operate it. No lessons needed.

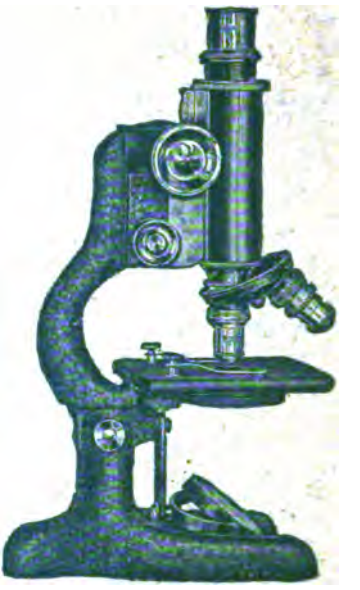
It has *all the Remington essentials*, standard keyboard, standard type, and writes letters of standard size—the kind with the hundred-dollar look.

Cut out and post today

REMINGTON TYPEWRITER COMPANY
(Incorporated)
327 Broadway, New York

Send me a Remington Junior Typewriter, price $50, on free examination. It is understood that I may return the machine, if I choose, within ten days. If I decide to purchase it, I agree to pay for it in 10 monthly payments of $5 each.

CUP



Noticeably Superior

Your first experience will be satisfactory and the longer and more regularly you use one the more you will be gratified at the optical accuracy, sturdy simplicity of design and practical improvements of the

Bausch and Lomb Microscopes

No matter what your work calls for, from a simple dissecting microscope to wonderfully precise compound instruments for the most delicate and highly specialized work, you will find one of our many models exactly suited to your requirements.

Model FS2 (illustrated) is particularly adapted for classroom, laboratory, and home use. It has lever side fine adjustment with the slow movement required for higher powers. Price $34.00—finished in black crystal, reagent proof and more durable than the ordinary lacquer.

Other models from $18.00 up. Single microscope, $2.50 up.

Special Terms to Educational Institutions

Write for descriptive catalogue of all models, giving illustrations and prices.

Bausch & Lomb Optical Co.
412 ST. PAUL STREET ROCHESTER, N.Y.
New York Chicago Washington San Francisco
Leading American Makers of Photographic Lenses, Binoculars, Projection Lanterns (Balopticons), and other High-Grade Optical Products.

Digitized by Google

THE SCHOOL REVIEW

A JOURNAL OF SECONDARY EDUCATION

Edited by

THE FACULTY OF THE SCHOOL OF EDUCATION
THE UNIVERSITY OF CHICAGO

and published in conjunction with

THE ELEMENTARY SCHOOL JOURNAL AND SUPPLEMENTARY EDUCATIONAL MONOGRAPHS

Vol. XXV DECEMBER 1917 No. 10

Some "Marks": An Administrative Problem
Frederick S. Camp

Socializing the Study of History
Fred W. Traner

Household-Arts Arithmetic
Katharine F. Ball and Miriam E. West

A Course in Socialized Civics
W. H. Hathaway

How to Keep in Touch with the Quantitative Literature of Education
H. O. Rugg

THE UNIVERSITY OF CHICAGO PRESS
CHICAGO, ILLINOIS, U.S.A.

THE CAMBRIDGE UNIVERSITY PRESS, London and Edinburgh
THE MARUZEN-KABUSHIKI-KAISHA, Tokyo, Osaka, Kyoto, Fukuoka, Sendai
THE MISSION BOOK COMPANY, Shanghai

Digitized by Google

PUBLICATIONS EDITED BY THE FACULTY OF THE SCHOOL OF EDUCATION OF THE UNIVERSITY OF CHICAGO

JOINT EDITORIAL COMMITTEE
CHARLES HUBBARD JUDD, *Chairman*

Articles and Editorials of *The School Review*
ROLLO LA VERNE LYMAN
FRANKLIN WINSLOW JOHNSON

Reviews
HAROLD ORDWAY RUGG
ROLLA MILTON TRYON

Articles and Editorials of *The Elementary School Journal*
FRANK NUGENT FREEMAN
HARRY ORRIN GILLET

Supplementary Educational Monographs
WILLIAM SCOTT GRAY

The School Review

ADVISORY BOARD

WILLIAM McANDREW, New York City
JEROME O. CROSS, Pasadena, California
I. M. ALLEN, Springfield, Illinois
H. C. MORRISON, Concord, New Hampshire
H. V. CHURCH, Cicero, Illinois
ALEXANDER INGLIS, Cambridge, Massachusetts
E. A. MILLER, Oberlin, Ohio
FRED C. AYER, Seattle, Washington
H. L. MILLER, Madison, Wisconsin

Vol. XXV CONTENTS FOR DECEMBER 1917 No. 10

Some "Marks": An Administrative Problem - - - - - - - - Frederick S. Camp 697

Socializing the Study of History - - - - - - - - - - - Fred W. Traner 714

Household-Arts Arithmetic - - - - - - - Katharine F. Ball and Miriam E. West 722

A Course in Socialized High-School Civics - - - - - - - - W. H. Hathaway 731

Educational News and Editorial Comment - - - - - - - - - - - - - - - 744

The Johns Hopkins Studies in Education; The Gary System in New York under Fire; Current Practice in City School Administration; Night Schools; Save the Social Centers; School Buildings Belong to the Public; War Saving on Method of Ordering Textbooks; Supervised Study; The Rapid-Advancement Class; Co-operation with Latin-American Universities.

Educational Writings:

I. How to Keep in Touch with the Quantitative Literature of Education - H. O. Rugg 753

II. Comment on Current Educational Writings - - - - - - - - - - - - 762

H. M. Keal and Nancy S. Phelps, Secondary Mathematics, I.—W. L. Vosburgh and F. W. Gentleman, Junior High-School Mathematics, First Course.—E. R. Breslich, Third-Year Mathematics for Secondary Schools.

III. Brief Descriptive Statements of New Publications - - - - - - - - - 768

The School Review is published monthly from September to June by the University of Chicago at the University Press. ¶ The subscription price is $1.50 per year; the price of single copies is 20 cents. Orders for service of less than a half-year will be charged at single-copy rate. ¶ Postage is prepaid by the publishers on all orders from the United States, Mexico, Cuba, Porto Rico, Panama Canal Zone, Republic of Panama, Hawaiian Islands, Philippine Islands, Guam, Samoan Islands, Shanghai. ¶ Postage is charged extra as follows: For Canada, 30 cents on annual subscriptions (total $1.80), on single copies 3 cents (total 23 cents); for all other countries in the Postal Union, 52 cents on annual subscriptions (total $2.02), on single copies 6 cents (total 26 cents). ¶ Patrons are requested to make all remittances payable to The University of Chicago Press in postal or express money orders or bank drafts.

Special Combination Rates: The School Review, the Elementary School Journal, and Supplementary Educational Monographs for one full year at a special rate of $6.00 plus 50 cents postage on the Monographs. The School Review and Monographs are offered at $5.50 for one full year plus 50 cents for postage. In case of Canadian and foreign subscriptions the usual postage charges noted above should be added.

The following are authorized to quote the prices indicated:

For the British Empire: The Cambridge University Press, Fetter Lane, London, E.C. 4, England. Yearly subscriptions, including postage, 8s. 6d. each; single copies, including postage, 1s. each.

For Japan and Korea: The Maruzen-Kabushiki-Kaisha, 11 to 16 Nihonbashi Tori Sanchome, Tokyo, Japan. Yearly subscriptions, including postage, Yen 4.00 each; single copies, including postage, Yen 0.50 each.

For China: The Mission Book Company, 18 Peking Road, Shanghai. Yearly subscriptions $1.50; single copies 20 cents, or their equivalents in Chinese money. Postage extra, if mailed direct outside of Shanghai, on yearly subscriptions 52 cents, on single copies 6 cents.

Claims for missing numbers should be made within the month following the regular month of publication. The publishers expect to supply missing numbers free only when losses have been sustained in transit and when the reserve stock will permit. Deliveries are not guaranteed within the war zones of Europe, nor in other countries where transportation is disturbed by conditions incident to war.

Business correspondence should be addressed to The University of Chicago Press, Chicago, Ill.

Communications for the editors and manuscripts should be addressed to the Editors of The School Review, The University of Chicago, Chicago, Illinois.

Digitized by Google

Entered as second-class matter, January 16, 1896, at the Post-office at Chicago, Illinois, under the Act of March 3, 1879.

TWO RECENT GINN PUBLICATIONS

PSYCHOLOGY: GENERAL INTRODUCTION

By **CHARLES HUBBARD JUDD**

Completely Revised

A complete revision of a book which is widely known as a summary of modern scientific investigation and as an introduction to the special lines of psychological investigation such as social psychology, educational psychology, and the psychology of special subjects. The volume was one of the earliest to emphasize the importance of behavior. The text, in its revised form, abounds in illustrative examples from the laboratory of experimental psychology. *$1.80*

CAESAR IN GAUL

By **BENJAMIN L. D'OOGE** *and* **FREDERICK C. EASTMAN**

A new volume supplying in one book all needed material for the second-year Latin class. The illustrations include four in colors. *$1.40.*

GINN AND COMPANY

Boston **New York** **Chicago** **London**
Atlanta **Dallas** **Columbus** **San Francisco**

FOOD STUDY

A new high-school textbook and laboratory manual in the study of foods and home management

By Professor Mabel T. Wellman

Head of the Department of Home Economics in Indiana University; formerly Instructor in Dietetics and Household Chemistry at Lewis Institute, Chicago

Published in 1917

Copiously Illustrated—Mailing Price $1.00

A splendidly balanced textbook, and the only one which has the privilege of presenting recipes from Farmer's "Boston Cooking School Cook Book."

The plan aims everywhere at the production of well-balanced meals, emphasizing the three real objects of the study—*time-saving, labor-saving, and money-saving.*

LITTLE, BROWN, & COMPANY

34 Beacon Street, BOSTON
623 South Wabash Avenue, CHICAGO

INEXPENSIVE COVERS FOR YOUR OLD PERIODICALS

When marked alphabetically with name of magazine and numerically by volume and arranged on the shelves, they look as well as bound volumes.

LIBRARY COVERS

	Dozen lots	100 lots
Standard size 10x7x4 @	$2.00 per doz.	$ 8.00 per 100
No. 2 size 12½x9½x4 @	2.50 "	11.50 "
No. 3 size 13x10x3½ @	3.00 "	15.00 "
No. 4 size 14½x10½x3 @	3.00 "	15.00 "
No. 5 size 16½x11½x3 @	3.50 "	17.50 "

F.O.B. Chicago

H. SCHULTZ & CO., *Inc.*

519 W. Superior Street, Chicago, Illinois

Digitized by Google

Are You Interested in the France of Today?

Then your interest includes the France of yesterday: the France of the Gauls, conquered by Caesar and profoundly Romanized; the France of the feudal period, with its spirit of chivalry; the France of universal influence in government, in the arts, in literature, in learning. To understand the France of today one must comprehend the France of the past, for, as CHARLES VICTOR LANGLOIS, of the University of Paris, asserts in

The Historic Rôle of France Among the Nations

(An Address)

"The ultimate object of all labor on the history of a nation is to determine that nation's present position and the direction in which it is moving." This little brochure will not tell you how the battle of Bouvines was won, nor how that of Poitiers was lost. But it interprets the history of France across the ages; it shows how the nation was formed and of what elements; what were its dominant ideals in the past and what it achieved, and what France represents today.

The story is told concisely and vividly. A limited supply of copies of the address, in paper covers, are available and will be sold while they last for 15 cents postpaid. Mention this announcement when ordering.

The University of Chicago Press
Chicago 5822 Ellis Avenue Illinois

NEW IMPRESSION

of a book which the *Outlook* calls "admirable and illuminating"

The Evolution of Early Christianity

***By* SHIRLEY J. CASE**
Professor of New Testament Interpretation
The University of Chicago

$2.25, postage extra (weight 1 lb. 11 oz.)

"The modern Church needs to learn from the experience of the early Church to make religion an affair of life and growth commensurate with the needs of the present generation."

The University of Chicago Press
Chicago 5822 Ellis Avenue Illinois

THE SCHOOL AND SOCIETY

***By* JOHN DEWEY**
Professor of Philosophy in Columbia University
Second Edition, Revised and Enlarged

Teachers and others concerned with education will be interested to know that ***The School and Society*** has been revised and much enlarged. The position of authority on educational subjects which the author holds and the popularity which the former edition enjoyed are indications of the value of this work. About seventy-five pages of educational contributions from the pen of Dr. Dewey have been added, making a book which consists of eight chapters.

xvi+164 pages, 12mo, cloth; $1.00, postage extra (weight 15 oz.)

Address all orders and communications to
The University of Chicago Press
CHICAGO 5822 Ellis Avenue ILLINOIS

Estimates Furnished for the printing of Educational and Scientific works in English, German, French, and all other modern languages.
THE UNIVERSITY OF CHICAGO PRESS, Chicago, Ill.

A Series of

Desk Outline Maps

Prepared by J. PAUL GOODE
Professor of Geography in the University of Chicago

THESE maps are accurate in detail, of highest quality in drawing, being superior to most maps used in books and magazines. They are printed on a fine quality of paper and give excellent results with colored pencil, water color, or ink. Maps come in four sizes from one to five cents each.

Write for complete list with prices

The University of Chicago Press
Chicago 5822 Ellis Avenue Illinois

New Spanish Books for High School Classes

A FOUNDATION COURSE IN SPANISH

By LEON SINAGNAN

Chairman of the Department of Spanish, Stuyvesant High School, New York City

The aim of this course is to adapt the study of the essentials of Spanish to the ability of the average beginner, and more particularly to the assimilative powers of a large number of pupils who take up the study of a foreign language for the first time.

The fundamental rules and principles of Spanish grammar have, therefore, been stripped of all technicalities and rare exceptions, and their presentation has been simplified to an extent not attempted hitherto. Only the essentials have been taken up, but no principle has been presented without the provision of adequate exercises for its thorough mastery.

The writer has scrupulously avoided the tendency to accumulate grammatical difficulties, or to introduce them in advance of their proper time. He has, moreover, confined himself to the use of previously acquired material, presenting nothing in any lesson which is not adequately explained either in that lesson or in the ones preceding.

New Volumes in the Macmillan Spanish Series

Manual de Correspondencia. By Ventura Fuentes and Alfredo Elías of the College of the City of New York.

A preliminary section on writing a letter followed by eleven illustrated social letters and forty-five business letters all helpfully annotated. The book is provided also with exercises and a verb review, tables of the Spanish numerals, and the abbreviations used in correspondence.

Mármol's Amalia. Edited by A. H. Corley of Yale College.

The dramatic story of political intrigue in Buenos Aires under the domination of General Rosas. A novel of high literary and historical value abridged for class reading.

New York Chicago Boston **THE MACMILLAN COMPANY** San Francisco Atlanta Dallas

The December Number of *Education* Is a Notable Number

We are pleased to announce the following exceptionally attractive table of contents: "The Work-Study-Play Plan vs. The Old-Time Formalism," by Anna Hedges Talbot, Ph.D., New York State Specialist in Vocational Training for Girls; "Reading by the Intelligence Method," by Superintendent Ridgley C. Clark, Seymour, Conn.; "The English Problem and the Junior High School," by M. Maude Manley, Champaign, Ill.; "The Classical Question Again," by George Austin Hitchcock, Ware, Mass.; "Concerning the Pupil," by Laura A. Meier, State Teachers' College, Cedar Falls, Iowa; and "The Personality of an Evening School Teacher," by Ralph C. Fitts, Director of Evening Schools, Gardner, Mass.

Education is the oldest of the high-class monthly educational magazines. Every number is made up of original contributions by well qualified educators.

Every Superintendent, every College or Normal School Professor, every Principal and teacher of High or Elementary Schools, *all* who desire to *grow professionally*, and to keep in touch with the current thought and latest methods in this great profession

Should Read *Education*.

Librarians should see that it is kept within reach and brought to the attention of teachers and intelligent parents among their patrons.

TESTIMONIALS

"As necessary to a teacher as a medical journal to a physician."—M. T. PRITCHARD, Master Everett School, Boston.

"I am entering my 19th year as a subscriber to *Education*. That is the best recommendation, I am sure, that I could give to a fellow educator seeking profitable journals for his use."—SUPT. P. S. BARNES, Bristol, Tenn.

"For the rank and file of teachers, and for persons engaged in administration work in education, I regard *Education* as one of the best of available monthlies."—DAVID SNEDDEN, Professor of Education, Columbia University.

"I am making use of . . . . *Education* as reference reading in one of my large classes in Education."—PROF. ARTHUR O. NORTON, Wellesley College.

$3.00 per year; 35 cents a number; sample for 6 two-cent stamps

THE PALMER COMPANY, 120 Boylston Street, Boston, Mass.

Digitized by Google

New and Forthcoming Books

A Manual of Style: *New Fifth Edition*

By THE STAFF OF THE UNIVERSITY OF CHICAGO PRESS

The increased value of the fifth edition will be evident to all who desire an authoritative guide on questions concerning the style of a book or any other printed matter. An invaluable handbook for writers, editors, teachers, librarians, ministers, lawyers, printers, proofreaders, etc.

270 pages, cloth; $1.50, postage extra (weight 1 lb. 6 oz.)

Martin Luther and the Morning Hour in Europe

By FRANK W. GUNSAULUS, Pastor of Central Church, Chicago, and President of the Armour Institute of Technology

Commemorating the four-hundredth anniversary of the beginning of the German Reformation.

50 pages, paper; 25 cents (postpaid 28 cents)

The Gospel of John

By EDGAR J. GOODSPEED, Professor of Biblical and Patristic Greek, the University of Chicago

A careful historical study, throwing much light upon the authorship and purpose of the gospel of John, and the part which it played in the thought and life of the early Christians.

44 pages, paper; 50 cents (postpaid 52 cents)

The Papers of the Bibliographical Society of America

Vol. XI, Nos. 3–4. July–October, 1917

Edited by AKSEL G. S. JOSEPHSON of the John Crerar Memorial Library

74 pages, paper; $2.00 (postpaid $2.04)

Stellar Parallaxes Derived from Photographs Made with the 40-Inch Refractor

(Publications of the Yerkes Observatory, Vol. IV, Part I)

By FREDERICK SLOCUM, S. ALFRED MITCHELL, OLIVER J. LEE, ALFRED H. JOY, and GEORGES VAN BIESBROECK

74 pages and 2 plates, paper; $1.50, postage extra (weight 11 oz.)

Contributions from Walker Museum

Vol. II, No. 1. The Structure and Relationships of Diplocaulus

By HERMAN DOUTHITT, Assistant Professor of Zoölogy, the University of Kansas

42 pages and 2 plates; 25 cents (postpaid 27 cents)

No. 2. Labidosaurus Cope, a Lower Permian Cotylosaur Reptile from Texas

By SAMUEL W. WILLISTON, Professor of Vertebrate Paleontology, the University of Chicago

16 pages, paper; 25 cents (postpaid 28 cents)

No. 3. The Phylogeny and Classification of Reptiles

By SAMUEL W. WILLISTON, Professor of Vertebrate Paleontology, the University of Chicago

14 pages, paper; 25 cents (postpaid 28 cents)

TO BE PUBLISHED IN DECEMBER

The Life of Lieutenant General Chaffee

By WILLIAM HARDING CARTER, Major General, the United States Army. Commander of the Central Department

"General Chaffee's career should be an inspiration to every young man whose tastes and qualifications suggest the army as a career."

260 pages, 16 half-tone inserts, cloth; $2.50, postage extra

Publications of the Members of the University of Chicago, 1902–1916

Compiled on the Twenty-fifth Anniversary of the Foundation of the University, by a COMMITTEE OF THE FACULTY

526 pages, cloth; $1.50 (postpaid)

THE UNIVERSITY OF CHICAGO PRESS

CHICAGO 5822 Ellis Avenue ILLINOIS

Digitized by Google

JUST PUBLISHED

Religious Education and American Democracy

PROF. WALTER S. ATHEARN, *Author of the Church School*

An epoch-making book. It will create a profound impression and be instrumental in introducing reforms, correcting errors, and creating radically new standards by which to guide the nation in the development of a worthy system of religious education.

For Whom Prepared

College Teachers. Public School Teachers. Educational administrators. Ministers and leaders of community thought. Church school workers of all grades. The Average Citizen.

WHAT THIS BOOK DOES:

1. Proposes a constructive program
2. Analyzes all the proposed methods
3. Gives a critical evaluation of the agencies now at work
4. Presents a definite and detailed outline for an adequate program
5. Discusses the problem of religious leadership
6. Introduces the reader to the literature devoted to the organization of religious education in a democracy.

COMPLETE BIBLIOGRAPHY

Price $1.50; postage 12 cents

THE PILGRIM PRESS

14 Beacon Street, BOSTON — 19 W. Jackson Street, CHICAGO

When looking for a thoroughly trained, experienced teacher of Physical Education, write the **Vocational Bureau** of the

NEW HAVEN NORMAL SCHOOL OF GYMNASTICS

1466 Chapel Street, New Haven, Conn.

30 Magazines All different, all late issues. Yours for only 25 cents prepaid. Great help in teaching. Satisfaction guaranteed. Eastern Bureau, New Egypt, N.J.

The University of Chicago Press

¶ Educational and Scientific works printed in English, German, French, and all other modern languages *Estimates Furnished*

5822 Ellis Avenue :: :: Chicago, Illinois

Teachers Wanted No enrolment fee. Positions always open. We also supply school boards with the most capable teachers. Particulars free. Eastern Educational Bureau, New Egypt, N.J.

"Training Children

to a competent and ready use of the *dictionary* and fixing the habit of consulting it is one of the main duties that the school can perform for a student:" says Dr. Suzzallo, President of University of Washington, Seattle.

WHEN QUESTIONS ARISE

in the history recitation, in language work, spelling, or about noted people, places, foreign words, synonyms, pronunciation, new words, flags, state seals, etc., do you suggest that

WEBSTER'S NEW INTERNATIONAL

Dictionary is a universal question answerer and contains just the information desired?

Your pupils should have every opportunity to win. Why not requisition your school officials for the New International the *One Supreme Authority?*

400,000 Words. 2700 Pages. New Gazetteer. 12,000 Biographical Entries. 30,000 Geographical Subjects. 6,000 Illustrations. Thousands of other References.

The only dictionary with the new divided page, characterized "A Stroke of Genius." Type matter is equivalent to that of a 15-volume encyclopedia.

GRAND PRIZE (Highest Award) Panama-Pacific Exposition.

REGULAR and INDIA-PAPER Editions.

WRITE for Specimen Pages, Illustrations, etc. FREE to teachers, a new booklet entitled the "Dog-Day Club."

G. & C. MERRIAM CO., Springfield, Mass., U.S.A.

Digitized by Google

Aids to the Study and Interpretation of Literature

The Modern Study of Literature

By RICHARD G. MOULTON, Head of the Department of General Literature, the University of Chicago

544 pages, cloth; $2.50, postage extra (weight 1 lb. 13 oz.)

"Thoroughly modern and saturated with the clear, vigorous and discriminating mentality of its author, this book will be an inspiration to multitudes of eager students and teachers."—*Education.*

London in English Literature

By PERCY H. BOYNTON, Associate Professor of English, the University of Chicago

358 pages, cloth; $2.00, postage extra (weight 2 lbs. 2 oz.)

(Contains maps and illustrations, footnotes indicating source lists of illustrative reading, detailed references to illustrative novels, and an index.)

"It has values far transcending that of mere utility, and we do not think we praise it too highly when we count it worthy to rank with the literature it has used so adroitly."—*The Outlook* (London).

English Poems

Selected and Edited with Illustrative and Explanatory Notes and Bibliographies

By WALTER C. BRONSON, Professor of English Literature, Brown University

Per set, $4.00, postage extra (weight 7 lbs. 8 oz.)

"A real library of English poetry from the earliest times to the present day."—*Springfield Republican.*

OLD ENGLISH AND MIDDLE ENGLISH PERIODS

434 pages, cloth; $1.00, postage extra (weight 1 lb. 14 oz.)

"By the aid of the glossary and notes, even the untrained worker can get the meaning of the poems presented without great difficulty."—*Chicago Herald.*

THE ELIZABETHAN AGE AND THE PURITAN PERIOD

562 pages, cloth; $1.00, postage extra (weight 1 lb. 14 oz.)

"The poems are selected both for their intrinsic worth and as representing the tendencies of the time, and the notes are concise, vivid, and original."—*Passaic Daily News.*

THE RESTORATION AND THE EIGHTEENTH CENTURY

552 pages, cloth; $1.00, postage extra (weight 1 lb. 14 oz.)

"Professor Bronson has again made use of liberal quotations from contemporary criticism and nothing could be more curious or surprising than the opinions expressed by the most prominent critics of the day on poems now regarded as classics."—*Brooklyn Eagle.*

THE NINETEENTH CENTURY

636 pages, cloth; $1.00, postage extra (weight 1 lb. 14 oz.)

"The work of the editor is done with rare judgment and discrimination; the notes are brief and informing."—*Watchman.*

American Poems

Selected and Edited with Illustrative and Explanatory Notes and a Bibliography

By WALTER C. BRONSON, Professor of English Literature, Brown University

688 pages, cloth; $1.50, postage extra (weight 2 lbs. 4 oz.)

"A truly adequate presentation of American poetry."—*Education.*

American Prose

Selected and Edited with Illustrative and Explanatory Notes and a Bibliography

By WALTER C. BRONSON, Professor of English Literature, Brown University

750 pages, cloth; $1.50, postage extra (weight 2 lbs. 4 oz.)

"*American Prose* is an interesting collection of the representative work of the great prose writers of America."—*The Continent.*

THE UNIVERSITY OF CHICAGO PRESS

CHICAGO **5822 Ellis Avenue** **ILLINOIS**

Digitized by Google

PRINCETON UNIVERSITY PRESS

VALUE OF THE CLASSICS

Edited by ANDREW F. WEST

Dean of the Graduate School, Princeton University

Contains in full the addresses delivered at the Conference on Classical Studies in Liberal Education held at Princeton, June 2, 1917, together with more than 300 statements by representative men in business and the professions, and a section of statistics.

396 pages; cloth, $1.50; boards, $1—both postpaid
Special rates on orders of 25 or more copies

PRINCETON UNIVERSITY PRESS
PRINCETON - - - - - NEW JERSEY

The Midland Schools Teachers' Agency, of Des Moines, Iowa, commands the confidence of employing school officers in every state west of the Mississippi River. Its methods are conservative, and its contract is one of the most liberal offered. Teachers desiring positions are requested to write for information today, and school officers in search of teachers will receive prompt and intelligent attention.

C. R. SCROGGIE, *Proprietor*

Send at Once for a FREE Catalogue of

EDUCATIONAL PICTURES

Every well-known picture in the world is illustrated and priced, also size and color given. The most elaborate and complete book of its kind ever published. A copy will be sent FREE upon application.

WALTER L. LILLIE

184 So. High St., Columbus, Ohio

Address Manager of Educ. Dept.

Le Soldat Américain en France

By COLEMAN and LA MESLÉE

A handbook and guide for conversation intended for those who already have some knowledge of French.

Cloth, 50 cents (postpaid 54 cents)

First Lessons in Spoken French for Men in Military Service

By WILKINS, COLEMAN, and HUSE

Prepared to meet the present urgent need. Special word-lists, with English equivalents, for all branches of service.

Cloth, 50 cents (postpaid 54 cents)

First Lessons in Spoken French for Doctors and Nurses

By WILKINS, COLEMAN, and PRESTON

Prepared to meet the present emergency. Special word-lists covering the everyday needs of doctors and nurses. Indispensable to those who desire efficiency.

Cloth, 50 cents (postpaid 54 cents)

For sale at all booksellers and news stands

THE UNIVERSITY OF CHICAGO PRESS
CHICAGO 5822 Ellis Avenue **ILLINOIS**

Digitized by Google

"How Do You Do, Mr. Riley?"

"Onct when I was ist a little girl—only four years old—mother and I were down town and I saw you not far away. I broke away from mother, ran up to you and said, 'How do you do, Mr. Riley?' I shall never forget the wonderful smile on your face when you turned and saw me, a tiny little tot. You bowed and spoke to me as though I were a queen, and when I told you I knew 'most all of your child rhymes and enjoyed them very much, you were as pleased as if some man-of-letters had complimented you. That, Mr. Riley, is one of my finest memories."

So wrote a grown-up little girl to James Whitcomb Riley.

Are you giving your children the precious memories of the beautiful poems? Will your children be able to say—"My mother read me Riley when I was a child—and 'The Raggedy Man' and 'Little Orphant Annie' have rejoiced and comforted me all the days of my life."

Riley is the children's poet —. ittle children and big ones — sometimes called grown-ups.

JAMES WHITCOMB RILEY

has passed on—and the grown-up world mourns. In the hearts of the little children is a void that cannot be filled—but that can be forgotten by the reading and re-reading of these simple and childlike poems.

No more does Uncle Sam's postman stagger under the weight of 10,000 letters—the tribute of the children of the world to their Uncle Sidney (James Whitcomb Riley) on his birthday. Riley has passed on but his work lives. You can read it to your children—and enrich their lives and yours for all time.

Those of us who have missed things in childhood—missed learning to ride or to swim—feel that there is a lack that can never be made up. Even more is this so with things of the spirit. The child whose imagination has been enriched by the beauty and charm of Riley, carries a treasure to old age—a treasure hard to get later on.

From the little girl who said she felt all alone without him to the President of the United States, who pays him tribute, Riley is in all hearts—big and little.

HIS HEIRS DESIRE ONLY A SMALL ROYALTY

The Heirs of James Whitcomb Riley came to us, as the publishers of Mark Twain, and said that they would be glad to reduce their royalty so that we could place the works of James Whitcomb Riley in the homes of all those who loved him. So we are able to make this complete set of all Riley's works—containing over 1000 titles and a biographical sketch of Riley—at a very low price—for the present—a price we can pass on to you.

We have planned a fitting form for these books—beautifully made—the easy-to-read, comfortable sort of books that James Whitcomb Riley would have liked. This set is full of luxurious and beautiful illustrations by Howard Chandler Christy and Ethel Franklin Betts—some in full color—some in two colors, and some in black and white.

The limited edition of Riley's complete works sold from $125 to $1750 a set. Yet you can have your set for less than one-fifth the lowest price made before.

The generosity of the Riley heirs and the resources of Harper and Brothers give you a rare opportunity. Don't miss it. **Send the coupon without money for your set on approval to-day.**

HARPER & BROTHERS **1817-1917** **NEW YORK**

Franklin Sq., N. Y.

Send for my free examination the complete works, over 1000 titles, of James Whitcomb Riley, 10 vols., cloth, stamped in gold, illustrated in color and black and white by Howard Chandler Christy and Ethel Franklin Betts. I may return it to you, at your expense, if I do not want it. If I keep the books I will remit $1.50 for 6 months.

School Review

Name.....

Address.....

Occupation.....

10% added to prices in Canada because of duty.

Google

LECTURE CHARTS AND SLIDES, STENCILS AND BOOKLETS

for

Teaching Agriculture in Schools

Simple, Practical, Impressive

Successful Teaching of Agriculture Assured. Send 10 cents in postage for samples of booklets.

Agricultural Extension Department
INTERNATIONAL HARVESTER COMPANY of N.J.
Harvester Building, Chicago

The Romans At Home

A series of sets of lantern slides illustrating the most significant phases of

ROMAN PRIVATE LIFE

Also sets illustrating the life and exploits of Julius Caesar, the political career of Cicero, the Wanderings of Aeneas, Roman Mythology, etc.

For the use of high schools and colleges. Vitalize the work in Latin and history.

These sets are from the negatives made by the Latin Department of the State University of Iowa for circulation through the Extension Department in the high schools of Iowa.

For particulars address

F. C. Eastman **Iowa City, Iowa**

PROFESSIONAL COMRADESHIP FOR THE TEACHER OF ENGLISH

The stimulus of personal touch with others engaged in like tasks is needed by all workers. This is provided for the teachers of English in the United States by *The English Journal*, edited by James Fleming Hosic.

This embodies the following features:

1. Leading articles discussing in an authoritative way every aspect of English teaching and the equipment for it.
2. Round Table contributions in a delightfully informal and direct manner.
3. Editorials setting forth important current educational issues.
4. News of the National Council of Teachers of English, of fifty local societies, of current articles and pamphlets valuable to English teachers; and
5. Reviews and notices of new books.

All leaders in education and writers on educational subjects refer to *The English Journal* as the authority in its field. It is indispensable to English teachers, for it is the best means of keeping them abreast of the times and in touch with their colleagues.

Published monthly, except July and August, at $2.50 a year, 30 cents a copy.

Address

THE ENGLISH JOURNAL

68th Street and Stewart Avenue **Chicago, Illinois**

Newest School Blanks Report Cards, Enrollment and Supply Record Blanks. Samples free. Books and Periodicals at Wholesale Prices.

J. W. BILODEAU, Lyndonville, Vermont

LIBRARIANS Library Catalogue Cards announcing new publications will be sent to you regularly on request.

THE UNIVERSITY OF CHICAGO PRESS, CHICAGO

POSITIONS OF ALL KINDS

Never was the demand so great for qualified teachers and specialists. For nine years we have given our time and energy to this work. Write for our *free* literature. State qualifications briefly.

Co-operative Instructors' Association
Marion . . . Indiana

If you do not receive our advertising matter regularly, ask to be put on our mailing list.

THE UNIVERSITY OF CHICAGO PRESS

TEACHER'S AGENCY

28 E. Jackson Blvd., Chicago

Boston New York Birmingham Denver Portland Berkeley Los Angeles

To this organization—national in scope—employers and teachers naturally turn in making a survey of the whole educational field for best teachers and teaching opportunities

High-School Teachers of Mathematics who are looking for a review book for Senior classes or for classes preparing to take college-entrance examinations should not fail to examine

Third-Year Mathematics for Secondary Schools

By ERNST R. BRESLICH

Head of the Department of Mathematics, University of Chicago High School

This book abounds in problems taken from the entrance examination papers of a number of colleges. These will form a good review of algebra.

The principal part of solid geometry is given on pages 239–330. Chapter xv is a syllabus of all the theorems of plane and solid geometry not proved in *Third-Year Mathematics*, and will make an excellent basis for a review of this subject.

The major portions of trigonometry are in chapters ii and ix; logarithms are treated in chapter vii.

The advantages of having all these subjects in the same book will make a strong appeal to the teacher. The student, on the other hand, will be glad to have a copy of the book, as he will find it valuable as a reference book in his future college mathematics.

Third-Year Mathematics for Seconday Schools

By BRESLICH

With Tables to 5 places $1.50, postage extra (weight 2 lbs. 2 oz.)

Without Tables $1.00, postage extra (weight 1 lb. 13 oz.)

Logarithmic and Trigonometric Tables and Mathematical Formulas

75 cents, postage extra (weight 13 oz.)

THE UNIVERSITY OF CHICAGO PRESS

CHICAGO **5822 Ellis Avenue** **ILLINOIS**

Digitized by Google

"FROM THE GREAT LAKES TO THE PACIFIC"

PROMPT
EFFICIENT
SERVICE

MINNEAPOLIS
TEACHERS'
AGENCY

WRITE FOR FREE
BOOKLET
306 14th Ave. S.E.
Minneapolis, Minn.

ADVERTISE and sell the books, supplies, and things you don't need. Reach 15,000 teachers for only 2 cents a word. Write *The School News*, New Egypt, N.J.

READ

AMERICANS AND THE WORLD-CRISIS

By ALBION W. SMALL

The American Journal of Sociology

September 1917

50 cents, single copy; $2.00 a year

The University of Chicago Press, Chicago, Illinois

THE SEVEN LAWS OF TEACHING

By Professor John M. Gregory, LL.D.

Revised by W. C. Bagley

A Masterpiece on the Art of Teaching

The chapter titles show the scope of the book. They are: 1. The Law of the Teacher. 2. The Law of the Learner. 3. The Law of the Language. 4. The Law of the Lesson. 5. The Law of the Teaching Process. 6. The Law of the Learning Process. 7. The Law of Review.

No Teacher can afford to be without it

Price 75 cents, postage 10 cents. At all booksellers

14 Beacon St. Boston, Mass. **THE PILGRIM PRESS** 19 W. Jackson Blvd. Chicago, Ill.

Colorado Teachers College

HOME STUDY Offers courses of instruction by correspondence. "The GREELEY PLAN" known throughout the U. S. helps students *in absentia*.

Ask J. G. CRABBE, President
Greeley, Colorado

ORAL ENGLISH

A satisfactory correlation of Oral English with certain of the regular composition and literature courses of the secondary schools has been effected by some of the leading high schools of the United States through the use of the inexpensive and compact little text, **Elements of Debating,** by LEVERETT S. LYON of the Joliet Township High School.

The virtues claimed for this little book by those who have put it into the hands of their pupils are these—

¶ It offers an effective way of producing Oral English.

¶ Instead of interfering with the regular composition and literature work, it correlates as a stimulating supplement.

¶ The book teaches the subject, thus establishing the confidence of the teacher untrained in public speaking and enabling such a teacher to do highly effective work.

¶ The book is written by a high-school man familiar with the high-school problem and is soundly within the vocabulary and experience of high-school pupils.

¶ A pamphlet, "Aid in Oral English," will be sent for the asking.

ELEMENTS OF DEBATING *by* LEVERETT S. LYON

x+136 pages, 12mo, cloth; $1.00, postage extra (weight 14 oz.)

THE UNIVERSITY OF CHICAGO PRESS

CHICAGO **5822 ELLIS AVENUE** **ILLINOIS**

Digitized by Google

This holiday season

officers and enlisted men will enjoy reading

The Life of
Lieutenant General Chaffee

***By* WILLIAM HARDING CARTER**

Major General, United States Army
Commander of the Central Department

"It has remained for the present generation to witness the solitary instance in which a soldier risen from the ranks of the Regular Army has been honored with the highest military office in the gift of the nation. Not for this exceptional fact, but because of his long and remarkable career in arms, the life-work of Lieutenant General Adna Romanza Chaffee deserves to be made of record, that future generations of Americans may comprehend what men of his time endured for the nation's sake. . . . . **General Chaffee's career should be an inspiration to every young man whose tastes and qualifications suggest the army as a career.**"—From the Author's Foreword.

260 pages, 16 half-tone inserts—$2.50, postage extra

(Ready December 15)

SPECIAL ATTENTION GIVEN TO ADVANCE ORDERS. YOUR CARD, IF SUPPLIED, WILL GLADLY BE INCLOSED IN GIFT COPIES WHICH YOU DESIRE MAILED DIRECT TO YOUR FRIENDS.

★ ★ ★ ★ ★ ★ ★ ★

THE UNIVERSITY OF CHICAGO PRESS

CHICAGO 5822 Ellis Avenue ILLINOIS

Digitized by Google

1918

Articles and Stories by

RICHARD THOMAS WYCHE

President of the National Story Tellers League.

Stories by

ANNA CURTIS CHANDLER

Official Story-teller, Metropolitan Museum of Art. With illustrations from the Museum Art Galleries.

Children's Department, edited by

ISABELLE VIRGINIA FREELAND

Children's Editor, the *Cleveland Plaindealer*.

LITTLE JOURNEYS

A Monthly Illustrated Travel-Talk.

Phonic Stories and How to Tell Them—A Course for Teachers, by

ANNIE LOCKE MacKINNON

Instructor in Story-telling, High School, Akron, Ohio.

STUDIES IN STORY-TELLING

Conducted by the *Storytellers' Magazine* and the National Story Tellers League.

The Storytellers' Magazine

Beginning in April

THE HOMERIC STORY OF ULYSSES

Concluding in December

by

RICHARD THOMAS WYCHE

"I have told this story hundreds of times but have never written it before."—Mr. Wyche.

Special Titles Include

JANUARY—"The Story of a Little Quaker Boy: Benjamin West," by ANNA CURTIS CHANDLER.

"Storytelling in Wartime," by RICHARD THOMAS WYCHE.

FEBRUARY—"Joan, Maid of Orleans," by ANNA CURTIS CHANDLER. With illustrations of the art and architecture of Joan's time.

"True Stories from the Life of Washington," by RICHARD THOMAS WYCHE.

MARCH—"The Fair Princess of Bekhten—An Egyptian Story," by ANNA CURTIS CHANDLER.

"The Golden Goose as I Tell It and Interpret It," by RICHARD THOMAS WYCHE.

THE STORYTELLERS' MAGAZINE

Published monthly except August by

The Storytellers Company

80 Fifth Avenue - - New York City

Price 15 cents ***Subscriptions $1.50***

Digitized by Google

For Next Semester

English

Halleck and Barbour's Readings from Literature

English and American Prose and Poetry

Spanish

Roessler and Remy's First Spanish Reader

Arouses interest in South America

Civics

Garner's Government in the United States

Practical handbook of government—teaches citizenship

Algebra

Rivenburg's Review of Algebra

Thorough and effective review

Botany

Coulter's Plant Life and Plant Uses

Shows human side of botany

Physiology

Davison's Human Body and Health. Advanced

Emphasizes care of body

New York
Cincinnati
Chicago
Boston
Atlanta

AMERICAN BOOK COMPANY

330 E. 22d Street
CHICAGO, ILLINOIS

Digitized by Google

SUPPLEMENTARY EDUCATIONAL MONOGRAPHS

Edited in conjunction with *The School Review* and *The Elementary School Journal*

Published by THE UNIVERSITY OF CHICAGO PRESS

VOL. I

Monograph No. 1

Studies of Elementary-School Reading through Standardized Tests. By WILLIAM SCOTT GRAY, PH.D., Assistant Professor of Education and Dean of the College of Education, University of Chicago. *Pp. viii+158. Price $1.00.*

Monograph No. 2

An Experimental Study in the Psychology of Reading. By WILLIAM A. SCHMIDT, PH.D., Professor of Education, University of Oklahoma. *Pp. iv+126. Price $0.75.*

Monograph No. 3

The Administration of Secondary-School Units. By LEONARD V. KOOS, PH.D., Professor of Education, University of Washington. *Pp. x+194. Price $1.00.*

Monograph No. 4

Experimental Studies in Arithmetic. By GEORGE S. COUNTS, PH.D., Professor of Education, University of Delaware. *Pp. iv+128. Price $0.75.*

Monograph No. 5

Types of Reading Ability as Exhibited through Tests and Laboratory Experiments. An Investigation Subsidized by the General Education Board. By CLARENCE TRUMAN GRAY, PH.D., Adjunct Professor of Education, University of Texas. *Pp. xiv+196. Price $1.25.*

Digitized by Google

Monograph No. 6

Survey of the Kindergartens of Richmond, Indiana. By ALICE TEMPLE, ED.B., Assistant Professor of Kindergarten Education, University of Chicago. *Pp. iv+58. Price $0.40.*

The six Monographs listed above complete Volume I. Volume II of the Monographs is now in preparation and will be published during 1918 under the general plan adopted for Volume I. The price will be the same, $5.00 plus 50 cents for postage. Or they may be obtained with a year's subscription to *The School Review* and *The Elementary School Journal* at a special combination price of $6.50.

SUBSCRIPTION RATES

The School Review - - - -	$1.50 a year
The Elementary School Journal - - -	1.50 " "
The Monographs - - - - -	5.00 per volume

Postage 50 cents extra

The **Monographs** are issued in single numbers which may be purchased separately. For convenience in binding and reference they are listed as numbers within a volume.

A combination of all three publications is offered for $6.00 plus 50 cents postage on the **Monographs.**

Digitized by Google

TO PRINCIPALS OF PREPARATORY SCHOOLS

A FEW years ago there was a tendency among the best private preparatory schools to discard the study of the Bible as being a tradition inherited from the past—as a matter of form rather than of educational value. A great change of view has come about as a result of the activity of modern re-valuations in education. Few schools of preparatory grade now regard their work as well rounded unless the curriculum includes ethical studies for character-building and biblical courses related to history and literature. Indeed, preparatory schools not under state control are congratulating themselves that they are free to enter this new field without controversy.

In this recognition of modern religious study as an essential aspect of education the problem of efficient teachers must be solved by the schools. The equally difficult problem of textbooks has already been met by the authors, editors, and publishers of the CONSTRUCTIVE STUDIES and other volumes named below.

We desire to direct your especial attention to volumes from

Digitized by Google

our publications in *religious education*, to the production of which we have brought from many sources a large amount of expert knowledge and practical experience. If your school is not already on the long list of those using these books, we shall be glad to assist you to become acquainted with the volumes by sending copies for examination with privilege of return. If you are already using some of the courses, may we not assume that you are looking forward to broadening your curriculum still further until **each grade shall have its appropriate book for biblical or ethical studies?**

Let us remind you of some of the outstanding features of our publications in this field. Many courses provide a *teacher's manual* containing bibliographies and suggestions for teaching. In text, illustrations, maps, binding, and all the features of mechanical production the books are *equal to any texts which the pupils use*. The subjects are all treated from the *modern point of view*, and pupils going to college from your school will find no clash between their views thus obtained and those which their college instructors will give them. The books present **facts** rather than theology and give no occasion for controversial discussions.

We solicit your correspondence upon any aspects of the problems of religious instruction in secular schools and await your requests for books for examination or for class use.

Digitized by Google

THE CONSTRUCTIVE STUDIES

FOR GRAMMAR GRADES

GRADES IV–VIII

An Introduction to the Bible for Teachers of Children. *By Georgia L. Chamberlin.* Teacher's Manual, $1.00, postage extra (weight 1 lb. 4 oz.). The Books of the Holy Bible, Pupil's Notebook, 35 cents, postpaid 39 cents.

The Life of Jesus. *By Herbert W. Gates.* Teacher's Manual, 75 cents, postage extra (weight 1 lb.). Pupil's Notebook, 65 cents, postage extra (weight 1 lb.).

Old Testament Story. *By Charles H. Corbett.* Teacher's Manual, $1.00, postage extra (weight 1 lb. 2 oz.). Pupil's Notebook, 65 cents, postage extra (weight 1 lb. 2 oz.).

Heroes of Israel. *By Theodore G. Soares.* Pupil's Textbook, $1.00, postage extra (weight 1 lb. 10 oz.). Teacher's Manual, $1.00, postage extra (weight 1 lb. 4 oz.).

Paul of Tarsus. *By Louise Warren Atkinson.* Teacher's Manual, $1.00, postage extra (weight 1 lb. 4 oz.). Pupil's Notebook, 65 cents, postage extra (weight 1 lb. 2 oz.). Pupil's Homework Book, 25 cents, postpaid 28 cents.

FOR HIGH-SCHOOL GRADES

Studies in the Gospel according to Mark. *By Ernest D. Burton.* Pupil's Textbook, $1.10, postage extra (weight 1 lb. 8 oz.).

Studies in the First Book of Samuel. *By Herbert L. Willett.* Pupil's Textbook, $1.25, postage extra (weight 1 lb. 10 oz.).

The Life of Christ. *By Isaac B. Burgess.* Pupil's Textbook, $1.25, postage extra (weight 1 lb. 8 oz.). Pupil's Notebook, 25 cents, postage extra (weight 12 oz.).

The Hebrew Prophets, or Patriots and Leaders of Israel. *By Georgia L. Chamberlin.* Pupil's Textbook, $1.25, postage extra (weight 1 lb. 14 oz.).

A Short History of Christianity in the Apostolic Age. *By George H. Gilbert.* Pupil's Textbook, $1.25, postage extra (weight 1 lb. 8 oz.).

The Problems of Boyhood. A Course in Ethics for Boys of High-School Age. *By Franklin W. Johnson.* Pupil's Textbook, $1.00, postage extra (weight 1 lb.).

Lives Worth Living. *By Emily Clough Peabody.* $1.00, postage extra (weight 1 lb. 4 oz.).

Social Duties from the Christian Point of View. *By Charles R. Henderson.* $1.25, postage extra (weight 1 lb. 8 oz.).

*OUTLINE BIBLE STUDIES

of the American Institute of Sacred Literature

The Message of the Prophets of Israel to the Twentieth Century. *By Herbert L. Willett.* 50 cents, postpaid 54 cents.

The Message of Jesus to Our Modern Life. *By Shailer Mathews.* 50 cents, postpaid 54 cents.

The Origin and Religious Teaching of the Old Testament Books. *By Georgia L. Chamberlin.* 50 cents, postpaid 54 cents.

The Origin and Teaching of the New Testament Books. *By Ernest D. Burton and Fred Merrifield.* 50 cents, postpaid 54 cents.

The Work of the Old Testament Sages. *By William R. Harper.* 50 cents, postpaid 54 cents.

The Social and Ethical Teaching of Jesus. *By Shailer Mathews.* 50 cents, postpaid 54 cents.

The Life of Christ. *By Ernest D. Burton.* 50 cents, postpaid 54 cents.

*With these studies the Bible itself is the chief textbook, and the manual is a series of directions for study

Digitized by Google

ORDER BLANK

Date _____

THE UNIVERSITY OF CHICAGO PRESS
5822 ELLIS AVENUE
CHICAGO, ILLINOIS

Please send books as checked below:

With Bill	For Examination	For Cash	Constructive Studies	Net Price
☐	☐	☐	*Introduction to the Bible* (Teacher's Manual)	$1.00
☐	☐	☐	*Introduction to the Bible* (Pupil's Notebook)	.35
☐	☐	☐	*The Life of Jesus* (Teacher's Manual)	.75
☐	☐	☐	*The Life of Jesus* (Pupil's Notebook)	.65
☐	☐	☐	*Old Testament Story* (Teacher's Manual	1.00
☐	☐	☐	*Old Testament Story* (Pupil's Notebook)	.65
☐	☐	☐	*Heroes of Israel* (Teacher's Manual)	1.00
☐	☐	☐	*Heroes of Israel* (Pupil's Textbook)	1.00
☐	☐	☐	*Paul of Tarsus* (Teacher's Manual)	1.00
☐	☐	☐	*Paul of Tarsus* (Pupil's Notebook)	.65
☐	☐	☐	*Paul of Tarsus* (Pupil's Homework Book)	.25
☐	☐	☐	*Gospel according to Mark* (Pupil's Textbook)	1.10
☐	☐	☐	*Studies in the First Book of Samuel*	1.25
☐	☐	☐	*The Life of Christ* (Burgess)	1.25
☐	☐	☐	*The Hebrew Prophets*	1.25
☐	☐	☐	*The Apostolic Age*	1.25
☐	☐	☐	*The Problems of Boyhood*	1.00
☐	☐	☐	*Social Duties from the Christian Point of View*	1.25
☐	☐	☐	*Lives Worth Living*	1.00
			Outline Bible-Study Courses	
☐	☐	☐	*The Message of Jesus to Our Modern Life*	.50
☐	☐	☐	*The Message of the Prophets to the Twentieth Century*	.50
☐	☐	☐	*The Origin and Teaching of the New Testament Books*	.50
☐	☐	☐	*The Origin and Religious Teaching of the Old Testament Books*	.50
☐	☐	☐	*The Life of Christ* (Burton)	.50
☐	☐	☐	*The Work of the Old Testament Sages*	.50
☐	☐	☐	*The Social and Ethical Teachings of Jesus*	.50

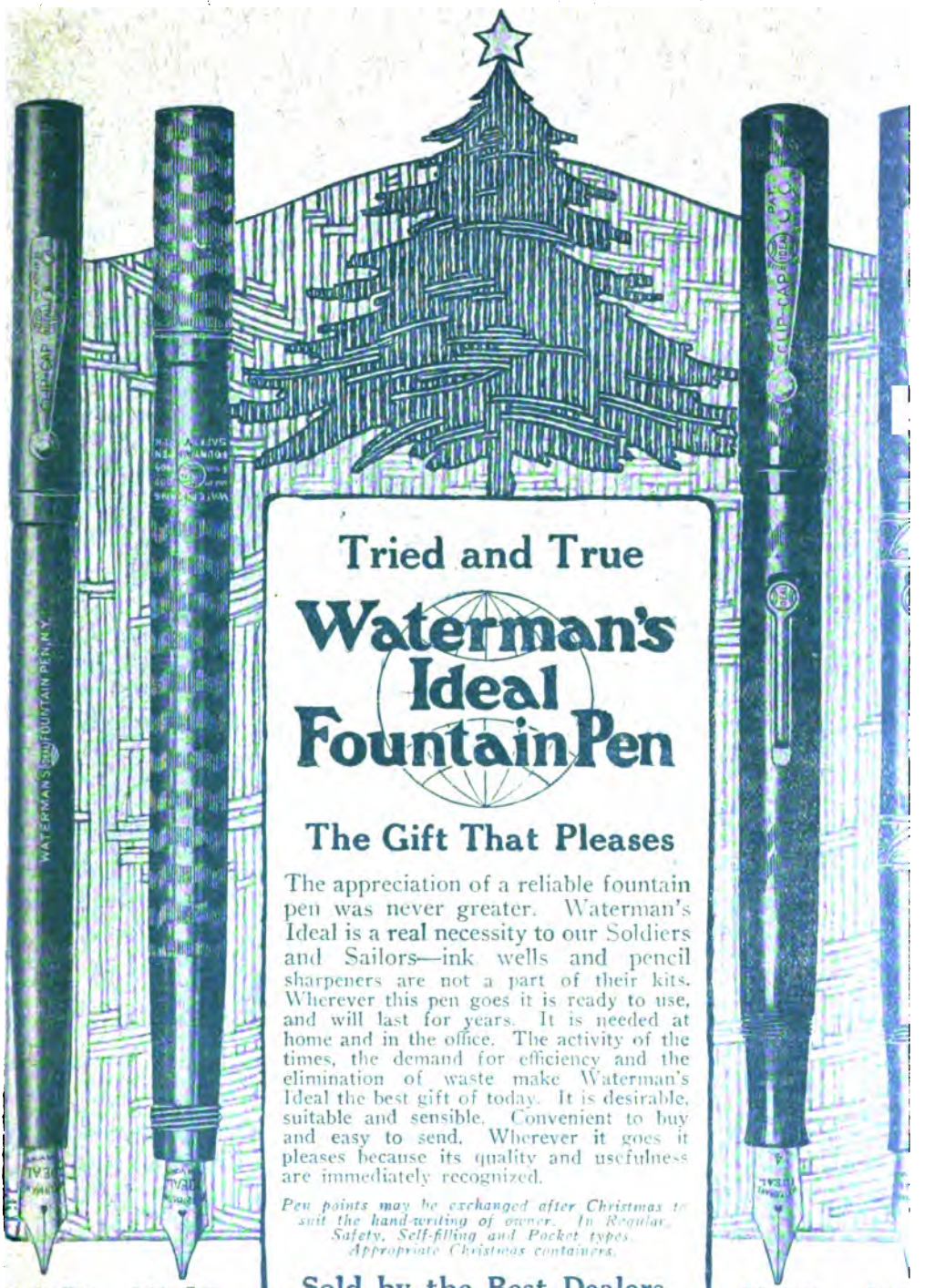
20 per cent discount on 5 or more copies of the same title ordered at one time.

Send to _____

Address _____

☐ Check here for complete descriptive **Catalogue of Religious Publications.**

Digitized by Google



Tried and True

Waterman's Ideal Fountain Pen

The Gift That Pleases

The appreciation of a reliable fountain pen was never greater. Waterman's Ideal is a real necessity to our Soldiers and Sailors—ink wells and pencil sharpeners are not a part of their kits. Wherever this pen goes it is ready to use, and will last for years. It is needed at home and in the office. The activity of the times, the demand for efficiency and the elimination of waste make Waterman's Ideal the best gift of today. It is desirable, suitable and sensible. Convenient to buy and easy to send. Wherever it goes it pleases because its quality and usefulness are immediately recognized.

Pen points may be exchanged after Christmas to suit the hand-writing of owner. In Regular, Safety, Self-filling and Pocket types. Appropriate Christmas containers.

Sold by the Best Dealers

L. E. Waterman Co., 191 Broadway, New York

24 School St., Boston 115 So. Clark St., Chicago
179 St. James St., Montreal 6 Rue Monsigny, Paris
17 Stockton St., San Francisco Kingsway, London

Regular Type		Safety Type	
Plain		Chased	
No. 12	$2.50	No. 44	$4.00
Gold Banded		Short Length	
$1.00 extra		No. 42½V	$3.00

CLIP when attached to CAP adds: Regular, 25 cents extra; Sterling Silver, 50 cents extra; Rolled Gold, $1.00 extra; 14K Gold, $2.00 extra.

Self-Filling		Self-F
Chased		Gold E
No. 52	$2.50	No. 065
Larger Size		Smaller
No. 54	$4.00	No. 065

In addition to the pens trated there is practically limited variety for selectio plain to elaborately ornat

Digitized by Google

SELF STARTING REMINGTON TYPEWRITER

Saves from 15% to 25% of every letter-writing hour

THIS new invention permits your typist to keep her eyes on her copy. The machine doesn't have to be looked at, or the scale watched. The time saving is automatic. There is no other typewriter like this. Fully protected by Remington patents.

Descriptive folders mailed on request.

REMINGTON TYPEWRITER CO.
(Incorporated)
NEW YORK AND EVERYWHERE

FINE INKS AND ADHESIVES
For those who KNOW

Higgins'

- Drawing Inks
- Eternal Writing Ink
- Engrossing Ink
- Taurine Mucilage
- Photo Mounter Paste
- Drawing Board Paste
- Liquid Paste
- Office Paste
- Vegetable Glue, Etc.

Are the Finest and Best Inks and Adhesives

Emancipate yourself from the use of corrosive and ill-smelling inks and adhesives and adopt the **Higgins Inks and Adhesives.** They will be a revelation to you, they are so sweet, clean, well put up, and withal so efficient.

At Dealers Generally

CHAS. M. HIGGINS & CO., Mfrs.
Branches: Chicago, London
271 Ninth Street Brooklyn, N.Y.

Simple in Operation Superior in Optics

Teachers, lecturers, instructors in classroom or laboratory, find that all the requirements of a projection lantern are completely met by the

Bausch and Lomb BALOPTICON
THE PERFECT STEREOPTICON

Its superiority of optical equipment, giving remarkable clearness to the corners of the image, its new and powerful Mazda lamp equipment, and its excellent mechanical construction combine with its ease of operation to make it an ideal means of graphic presentation for frequent use.

Model C—for slides. Has new 400-watt Mazda lamp, giving illumination superior to that of any similar instrument on the market. Price, **$35.00 up.**

Combined Model—for both slides and opaque objects. Equipped with 1000-watt lamp giving superior illumination to the 35-ampere, A.C. arc lamp—yet using only 9 amperes. Price, **$120.**

Other models from **$26.50 up.**

Write for interesting descriptive matter and illustrated price list.

Bausch & Lomb Optical Co.
654 ST. PAUL STREET, ROCHESTER, N.Y.
NEW YORK, WASHINGTON, CHICAGO, SAN FRANCISCO
Leading American Makers of Microscopes, Projection Apparatus, (Balopticons) Photographic and Ophthalmic Lenses, Stereo-Prism Binoculars, and other High-Grade Optical Products.

Digitized by Google

Digitized by Google

Digitized by Google

V. 25

LIBRARY, SCHOOL OF EDUCATION, STANFORD

247527

THIS BOOK
DOES NOT CIRCULATE

Digitized by Google

Digitized by Google

V. 25

LIBRARY, SCHOOL OF EDUCATION, STANFORD

247527

THIS BOOK
DOES NOT CIRCULATE

Digitized by Google